

SPECIFICATIONS
FOR
FARM ROAD PARK
BLOCK 203 LOT 41, 42 & 43
TOWN OF SECAUCUS
HUDSON COUNTY, NEW JERSEY

Michael Gonnelli, Mayor

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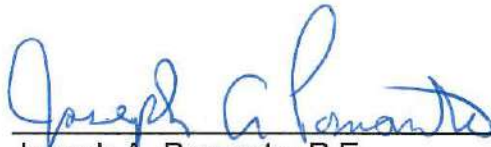
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This project is funded by a grant
from the NJDEP and the Town of
Secaucus

BOSWELL ENGINEERING
330 Phillips Avenue
South Hackensack, NJ 07606
N.J. Certificate of Authorization No. 24GA27958000

SEC-155



Joseph A. Pomante, P.E.
Professional Engineer
New Jersey License No. 43137

January 25, 2022

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DEFINITION OF TERMS

Owner	Town of Secaucus Hudson County, New Jersey
Engineer	Stephen T. Boswell, P.E. Boswell Engineering 330 Phillips Avenue South Hackensack, N.J. 07606
Contractor	Party to whom the contract is awarded acting directly or through authorized representatives or employees.
Plans & Specifications	All engineering plans and specifications prepared by Boswell Engineering, and as directed herein, shall govern in the execution of the work.
Owner's Attorney	Keri Ann Eglentowicz, Esq. Keri Ann Eglentowicz, LLC. 24 Blondel Drive Secaucus, NJ 07094

**ADVERTISEMENT FOR BIDS
TOWN OF SECAUCUS
HUDSON COUNTY, NEW JERSEY**

Sealed bids will be received by the Town of Secaucus, 1203 Paterson Plank Road, 1st Floor, Council Chambers, Secaucus, New Jersey 07094 in the County of Hudson and State of New Jersey on March 2, 2022 at 10:00 a.m. prevailing time, and then publicly opened and read aloud for:

**FARM ROAD PARK
TOWN OF SECAUCUS
HUDSON COUNTY, NEW JERSEY**

The work to be performed under this contract includes the construction of a dog park along the Hackensack River. All NJDEP permits and Soil Conservation approvals will be provided by the Town to the lowest bidder upon award of contract.

Principal items of work in the project include:

430 L.F.	6' Tall Fence
810 S.Y.	Dog Park Gravel Base
430 S.Y.	Walkways
900 S.Y.	Asphalt Area
1 Unit	Headwall
4 Unit	Inlets
250 L.F.	12" Reinforced Concrete Pipe
10 L.F.	15" Reinforced Concrete Pipe
L.S.	Bioretention Basin
L.S.	Plantings
10 S.F.	Riprap Apron, 12" Thick (D50=6")
L.S.	Lighting and Electrical

Alternative bid item:

L.S.	30' Pavilion
S.F.	Pavilion Foundation

The work contemplated under this Contract shall be completed within 120 days of contract award.

Copies of plans, specification, and contract documents will be on file for public inspection and may be obtained upon payment of \$30.00, said sum not refundable, at Boswell Engineering, 330 Phillips Avenue, South Hackensack, New Jersey 07606, between the hours of 9:00 a.m. and 4:00 p.m. prevailing time, Monday through Friday, excluding legal holidays.

Each bid must be made upon the prescribed forms, furnished with the Contract Drawings and Specifications, including the non-collusion affidavit and ownership statement compliance form and must be accompanied by a Consent of Surety and a certified check, cashier's check, or Bid Bond of not less than ten (10%) percent of the amount bid and, not to exceed \$20,000.00. Such checks and Bonds shall be made payable to the Owner and will be held as a Guarantee that in the event the Bid is accepted and a Contract awarded to the bidder, the Contract shall be duly executed and its performance properly secured. The successful bidder

shall furnish and deliver to the Owner a performance and payment bond in the amount of 100 percent of the accepted bid amount as security for the faithful performance and payment of the Contract. Further, the successful bidder must furnish the policies or Certificates of Insurance required by the Contract. In default thereof, said checks and the amount represented thereby will be forfeited to the aforesaid Owner as liquidated damages. Bids must be accompanied, in the case of corporations not chartered in New Jersey, by proper certificate that such corporation is authorized to do business in the State of New Jersey.

Bidders are required to comply with the requirements of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27 regarding equal employment opportunity, as amended. All corporations and partnerships must comply with Chapter 33, of the P.L. of 1977, regarding disclosure of partners and stockholders. Each bid must be enclosed in a sealed envelope bearing the name and address of the bidder, addressed to the Owner and labeled for FARM ROAD PARK.

All contracts and subcontracts for construction or purchase of materials are subject to Section 3 of the Housing and Community Development Act of 1968 where to the greatest extent possible, opportunities for training and employment shall be given to lower income residents of the project area, and when possible, contracts shall be awarded to business concerns owned by area residents.

Small, Minority and Women's Business Enterprises are encouraged to obtain specifications and compete for the contracts assisted with Community Development Block Grant funds.

The successful bidder will be required to comply with all provisions of prevailing wage rates as determined by the New Jersey Department of Labor and Federal Department of Labor (Davis-Bacon Act).

All bids shall be irrevocable, not subject to withdrawal and shall stand available for a period of sixty (60) days.

The Owner reserves the right to reject any and all bids, to waive informalities or irregularities in the bids received and to accept the bid from the lowest responsible bidder.

TOWN OF SECAUCUS

Michael Marra, Town Clerk

INFORMATION FOR BIDDERS

INFORMATION FOR BIDDERS

1. Contract Documents

A copy of the Contract Documents will be supplied to prospective bidders upon payment of the amount that is specified in the advertisement, none of which is refundable, for each set, payable in cash or check, at Boswell Engineering, 330 Phillips Avenue, South Hackensack, New Jersey 07606.

The Owner, pursuant to N.J.S.A. 40A:11-25, may require from any person proposing to bid hereon a statement showing his financial ability and experience in performing public work before furnishing him with the Contract Documents and, if not satisfied with the sufficiency of the statement, may refuse to furnish the Contract Documents to him.

2. Proposal Form

The proposal form is a complementary part of the Contract Documents and shall be used by the bidder in his submission. All blank spaces for unit prices, extended totals, summation, and lump sums must be completed in ink or typewritten. All erasures or other physical changes in the bid shall be signed or initialed by the bidder. Any omission in the Proposal shall be just cause for rejection.

3. Submission of Bid

Bidders must use the proposal forms provided. The Proposal shall be enclosed in a sealed opaque envelope and the outside of the envelope shall bear the name and address of the bidder as well as designation of the project.

Bids will be received by the Owner at the time and place designated in the Advertisement.

4. Bid Bond

Accompanying each bid shall be a certified check, cashier's check or bid bond, in an amount not less than ten percent (10%) of the amount of the bid but not more than \$20,000.00.

Such bid security shall be returned to all but the three lowest bidders within ten working days after the date of bid opening and the bid securities of the three lowest bidders will be returned within three (3) working days after the contract has been executed. If no Contract has been executed within sixty (60) days after the date of the bid opening, the Owner agrees to return the bid securities upon demand. No interest will be allowed upon any bid security.

5. Consent of Surety

In addition to the bid security, each bidder must file with his bid a letter from a surety company which states, in the event said bidder is awarded the Contract, that the surety company will furnish a performance bond and payment bond in the amount of one hundred percent (100%) of the amount of the Contract.

6. Performance Bond

The successful bidder shall furnish and deliver to the Owner, along with the executed contract, a bond in the amount of one hundred percent (100%) of the contract price as security for the faithful performance of the contract, and guaranteeing 100 percent of the work performed. The performance bond must be executed by a responsible surety company acceptable to the Owner with a rating of "A" or better as determined by Best Rating System and authorized to transact business in the State of New Jersey. The performance bond shall be in accordance with N.J.S.A. 2A:44-143 to 147. This bond may be in the form of a single performance and payment bond in the total amount of one hundred percent (100%) of the amount of the contract price.

7. Payment Bond

The Contractor or Contractors to whom the Contract is awarded shall give a bond for one hundred percent (100%) of the full amount of the contract price in satisfactory legal form of a surety company or companies with a rating of "A" or better as determined by Best Rating System authorized to do business by and operating in accordance with the laws of the State of New Jersey and to be approved by the said Owner for the protection of all persons furnishing materials or labor for the construction of this contract to the Contractor or any subcontractors, said material and labor bond to be in the form required by Chapter 2A:44-143 to 147, N.J.S.A. and amendments thereto and supplements thereto, said bond not be returned and cancelled until all liability to any and all persons protected by the condition of said bond shall have been met by the Contractor or persons primarily liable for the payment thereof, or by the surety on said bond. This bond may be in the form of a single performance and payment bond in the total amount of one hundred percent (100%) of the amount of the contract price.

The surety company issuing the payment bond shall have the minimum surplus and capital stock or net cash assets required by N.J.S.A. 17:17-6 or N.J.S.A. 17:17-7, whichever is appropriate, at the time the invitation to bid is issued. Furthermore, the surety company, with respect to the issuance of the payment bond, must expressly comply with all of the provisions contained in N.J.S.A. 2A:44-143(b), with respect to the requirements concerning the holding of a current Certificate of Authority, issued by the United States Secretary of the Treasury pursuant to 31 U.S.C. Sec. 9305, that is valid in the State of New Jersey as listed annually in the United States Treasury Circular 570.

Moreover, with respect to the issuance of the payment bond, the surety company must submit the statutorily required Surety Disclosure Statement and Certification, required by N.J.S.A. 2A:44-143(d.), a copy of which document is included in these specifications, and furthermore, must meet all of the requirements of the Commissioner of Insurance of the State of New Jersey with respect to issuance of payment bonds for construction projects involving public funds.

8. Errors in Bid

In the event there is a discrepancy between the unit prices and the extended totals, the unit prices shall prevail. In case there is an error in the summation of the extended totals, the extended totals shall govern and the computed summation by the Engineer shall be accepted as the amount bid.

In the event there is a discrepancy between the item unit bid prices written in numbers and the item unit bid prices written in words, the item unit bid prices written in words shall govern.

9. Estimated Quantities

The quantities as listed in the proposal are approximate only, and are given as a basis for the comparison of bids. The Owner reserves the right to increase or decrease any item to any amount.

Any such change in quantity shall not be regarded as sufficient grounds to renegotiate the unit price bid for that item unless such item is increased or reduced by more than twenty-five percent (25%).

10. Condition of Job Site

Each bidder shall make a careful investigation of the job site and inform himself fully of the conditions relating to the construction and labor under which the work will be performed. Failure to do so will not relieve the successful bidder of his obligation to perform the work as set forth in the Contract Documents.

Bidders are hereby notified that it will be their responsibility to obtain information which they may require as to subsurface conditions and the location of underground utilities.

Each bidder by submission of his bid represents that he has apprised himself of all conditions, and the kind, quality, and quantity of work to be performed.

11. Addenda and Interpretations

No interpretations of the meaning of the Contract Documents will be made orally by the Engineer to any prospective bidder.

Notice of revisions or addenda to advertisement or bid documents relating to bids shall be no later than seven (7) days, Saturdays, Sundays and holidays excepted, prior to the date for acceptance of bids be published in a legal newspaper and be made available by notification in writing by certified mail to any person who has submitted a bid or who received a bid package.

12. Failure to Enter Into Contract

Should the successful bidder fail to execute and deliver the Contract, Certificate of Insurance, Payment and Performance Bonds within ten working days after the receipt of written notification by the Owner that the Contract is ready for execution, the bidder forfeits to the Owner as liquidated damages the security deposited with his bid.

13. Rejection of Bids

The Owner reserves the right to reject any or all bids and to waive any informality if deemed in the best interests of the Owner.

14. Utilities

Bidders are hereby notified that it will be the Contractor's responsibility to notify respective utility companies of any damages caused by the Contractor to their lines and see that the same will be repaired immediately at no cost to the Owner.

15. Work Scheduling

Prior to beginning of construction, the Contractor is required to submit in writing work schedules, which shall have the approval of the Engineer. The Contractor is also required to submit in writing prior to beginning of construction the methods of construction to be used in performance of this project.

16. The Bids

On a bid for any contract, the Owner reserves the right to hold a hearing to determine who is the most qualified bidder based on experience, ability to perform the work, financial ability, and work previously performed by the bidder in the particular area for which he has bid. All bidders agree that the decision of the Owner shall be final and not appealable unless such decision is made in bad faith. The Owner reserves the right to determine between two (2) tie bidders who shall receive the contract by drawing lots. In the event that the Owner makes such a decision, the names of each of the tie bidders shall be placed in a suitable receptacle and deposited in a closed container which shall be vigorously shook and a representative of the Owner or the Engineer shall draw the name of the successful bidder from the receptacle. All contractors, by submitting a bid, agree to the foregoing terms in determining a tie between two (2) bidders.

17. Discrimination, Affirmative Action Program and Equal Employment Opportunity (EEO)

Bidders are required to comply with the requirements of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27, and with all regulations promulgated thereunder. The Contractor also agrees to submit a copy of the Monthly Project Work Form AA-202 once a month thereafter for the duration of the contract to the Division of Public Contract's Equal Employment Opportunity, compliance of the Department of Treasury of the State of New Jersey and to the Owner's compliance officer.

18. Beneficial Ownership In Bidder

Pursuant to Chapter 33, P.L. 1977, all bidders shall set forth, in an appropriate statement, the names and addresses of all stockholders in the corporation, partners in a partnership or other persons in a business entity who have a ten (10%) percent or more interest or any individual who has a ten (10%) percent or more interest in the business entity which may bid on the aforesaid contract.

19. Payment of Wages

Bidders on this contract will be required to pay the prevailing wage rates for the locality in which the project is to be performed. The prevailing wage rate shall be determined by the Secretary of Labor in accordance with the Davis/Bacon Act, as amended, or the New Jersey Prevailing Wage Law of 1963, Chapter 150 (N.J.S.A. 34:11 - 56.25 et. seq.), whichever rates are higher.

The Contractor shall pay the minimum rates determined by the United States Secretary of Labor and the New Jersey Department of Labor. If the minimum wage rate prescribed for any craft by the United States Secretary of Labor is not the same as the minimum wage rate prescribed for that craft by the New Jersey Department of Labor, the higher rate shall be the rate paid.

The state wage rates in effect at the time of award are made a part of this contract, pursuant to Chapter 150, Laws of 1963 (N.J.S.A. 34:11-56.25 et. seq.).

In the event it is found that any employee of the Contractor or any subcontractor covered by the contract, has been paid a rate of wages less than the minimum wage required to be paid by the contract, the Owner may terminate the Contractor's or subcontractor's right to proceed with the work, or such part of the work, as to which there has been a failure to pay required wages and to prosecute the work to completion or otherwise. The Contractor and his sureties shall be liable to the local government for any excess costs occasioned thereby.

20. Requirements Before Contract

The Owner requires the submission of the Performance Bond and Payment Bond, Certificate of Insurance, Affirmative Action Affidavit, and Initial Project Workforce Report (Form AA-201) before contracts are issued.

GENERAL CONDITIONS OF THE CONTRACT

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GENERAL CONDITIONS OF THE CONTRACT

ART. 1 DEFINITIONS

Certain terms are used from time to time in the Contract Documents and shall be construed as follows:

Contract Documents - consist of the Advertisement, Information for Bidders, Proposal, Agreement, General Specifications, Supplemental Specifications, Plans, and Addenda, if any. These form the Contracts.

Owner - shall mean the specific body as indicated in the Agreement.

Engineer - shall mean the individual or his agent so designated by the Owner.

Contractor - shall mean the successful bidder who is the party of the second part of the Agreement. For convenience throughout the Contract Documents, the Contractor shall be referred to as an individual.

Subcontractor - shall mean those having a direct contract with the Contractor to furnish materials worked to a special design according to the Contract Documents of this work.

Work - shall mean all labor, materials, supplies, tools and equipment, insurance, bonds, and other facilities necessary to complete the Contract.

Surety - shall mean the corporate body which is bound with and for the Contractor and which engages to be responsible for his payment of all debts pertaining to and for his acceptable performance of the work for which he has contracted.

Drawings - shall mean all sketches, blueprints, plans, and reproductions of drawings pertaining to the construction of the structures and appurtenances.

Specifications - shall mean the directions, provisions and requirements, contained herein, together with all written agreements made to the method and manner of performing the work or the quantities and qualities of materials to be furnished under the Contract.

Extra work - shall mean any work required by the Owner, which in the judgment of the Engineer, involves changes in or additions to that work required by the Contract Documents.

Written Notice - shall mean notice which has been duly served when delivered to or at last known business address of the person, firm or corporation for whom intended or when enclosed in a prepaid postage wrapper or envelope addressed to such person, firm, or corporation at the last known business address and deposited in a United States mail box. All notices sent by mail shall be certified, and the time of receipt shall be used for the determination of any waiting period for action to be taken as called for in the Contract Documents.

ART. 2 INTENT OF CONTRACT DOCUMENTS

The Contract Documents are complementary, and what is required or called for by any one of them shall be as binding as if mentioned by all. The intention of the documents is to include all labor and materials, equipment and transportation necessary for the proper execution of the work in a good and workmanlike manner. In the performance of the work, the Contractor shall also bear all costs of insurance; obtain and pay for any necessary permits; royalties; conform to all federal, state, county, and municipal legislation pertinent to this project; and protect the work during construction. The Contractor shall also provide to the Owner any and all equipment warranties which are standard and transferable.

ART. 3 ORDER OF COMPLETION

The Contractor shall submit a schedule which will show the order in which the proposed work will be performed and the dates when each part will be started and completed. The order of work shall be approved by the Engineer.

ART. 4 OWNERSHIP OF DRAWINGS

All furnished Drawings, with the exception of the Contract set, are the property of the Engineer, and shall be returned to him at the completion of work.

ART. 5 CONTRACTOR'S UNDERSTANDING

It is understood and agreed that the Contractor has satisfied himself as to the nature and location of the work; the character, quality and quantity of the necessary material; the character of equipment and facilities needed to perform the work; the general and local surface and subsurface conditions; all federal, state, county and municipal ordinances which may affect the work to be performed under this Contract.

ART. 6 CONTRACTOR'S RESPONSIBILITY

The Contractor shall be responsible for all parts of the work, temporary and permanent, until the project is accepted by the Owner. The Contractor shall also bear all losses resulting from any unforeseen difficulties which may be encountered; or delays of work resulting from the breaking, leaking or relocation of any underground utilities; or from delays required for any related or adjoining contract and shall save the Owner harmless from all claims of any kind arising from the performance of this Contract.

The Contractor shall be responsible for any and all damage caused by or due to flooding during construction, which damages either personal and/or real property, and it will be his responsibility to take adequate steps during the course of construction to prevent such damage.

The Contractor is solely responsible for compliance with all applicable safety regulations regarding safety and confined space entry including, but not limited to, those of the Occupational Safety and Health Administration (OSHA), National Safety Council, State of New Jersey, Department of Labor and Industry, etc.

ART. 7 OWNER'S RESPONSIBILITY

The Owner shall be responsible for the ownership of lands, easements, or slope rights upon which the proposed work is to be constructed. The Owner shall not be responsible for lands used for storage of the Contractor's equipment. If the Contractor desires temporary use of other land during construction, he will secure written permission from the owner and shall file a duplicate copy of such permission with the Owner.

ART. 8 SUBCONTRACTORS

The Contractor, prior to engaging any subcontractor, shall furnish the Engineer, in writing, with the name and address of the subcontractor; and the nature and extent of the work to be performed. A list of five completed similar projects by the subcontractor and the name, address and phone number of the Engineer in-charge shall also be furnished. The Contractor shall not award any subcontract until the proposed subcontractor has been approved by the Engineer and evidence has been presented to the Owner that the employees of the subcontractor are protected by compensation insurance. The Contractor shall require the Subcontractors to comply with any and all rules, regulations, laws, statutes and contract requirements set forth herein that apply to the Contractor.

The Contractor agrees that he is fully responsible to the Owner for acts or omissions of his subcontractor and of persons either directly or indirectly employed by them.

The Owner reserves the right to require the Contractor to construct, with his own employees, not less than forty percent of the total value of the Contract; such percentage to be calculated on the basis of the original bid proposal.

Nothing contained in the Contract Documents, shall create any contractual relation between any subcontractor and the Owner.

ART. 9 SUPERINTENDENTS

The Contractor shall keep on the work site at all times during its progress, a competent superintendent who shall be satisfactory to the Engineer. The superintendent shall not be changed except with the consent of the Engineer, unless the superintendent ceases to be in the Contractor's employ. The superintendent shall represent and have full authority to act for the Contractor. Any directions so given shall be confirmed in writing by the Engineer upon written request of the Contractor.

The Contractor shall also furnish to the Owner the telephone numbers of his superintendent and assistants for any emergency arising outside the normal work day schedule as a result of the Contract. If such an emergency does arise, and the Owner cannot contact the Contractor or his agents, or the Contractor or his agent does not arrive on the job site within two hours of such notification, the Owner reserves the right to correct the situation. Any costs incurred by the Owner shall be reported, in writing, to the Contractor for immediate payment. No additional estimates for work under this Contract shall be paid to the Contractor until the Owner is in receipt of payment for such emergency work.

ART. 10 PROTECTION OF WORK AND PROPERTY

The Contractor shall continuously maintain adequate protection of all his work, the Owner's property and operations, existing utility facilities, and adjacent property from injury or loss arising in connection with this Contract. He shall be responsible for such damage, loss or injury except if caused by agents or employees of the Owner.

In the event of emergency affecting the safety of life or of the work or of adjoining property, the Contractor shall act to prevent such threatened loss of property without authorization by the Owner, and he shall act, without appeal, if instructed by the Owner. Any compensation due to the Contractor by reason of such action shall be determined by agreement prior to the submittal of the next monthly estimate.

In the event of a discharge of sewage to surface or ground, the Contractor shall be responsible for following all applicable Federal, State and local rules and regulations relative to reporting and clean-up operations.

The Contractor shall provide clear video tapes taken before and after construction of those areas where contemplated construction activities are in close proximity to the private and other properties within the easements duly existing or obtained.

The cost of taking, developing and furnishing copies of these video tapes shall be borne by the Contractor.

The before construction video tapes must be submitted to the Engineer for his review prior to commencement of the actual construction work.

ART. 11 INSPECTION OF WORK

The Owner shall have the right to inspect all materials and work performed during any phase of construction and the Contractor shall provide all reasonable facilities for the safe and convenient means of such inspection. The Contractor shall notify the Engineer of any work requiring inspection 72 hours prior to commencing work. Unless otherwise authorized, work shall be done only in the presence of the Engineer or an authorized representative. Any work done without proper inspection will be subject to rejections and not approved for payment. Inspection of the work shall not relieve the Contractor of the obligation to fulfill all conditions of the Contract.

No work shall be closed or covered until it has been duly inspected and approved. Should un-approved work be covered, the Contractor shall, if requested by the Engineer, uncover all work for inspection. The cost of uncovering the work and replacement shall be borne by the Contractor.

The cost of inspection shall be borne by the Owner during the normal work week. The wages and overhead for inspection services on Saturdays, Sundays, legal holidays, or on week days outside the hours of 8:00 A.M. to 4:30 P.M. inclusive shall be borne by the Contractor.

ART. 12 CHANGES IN THE WORK

The Owner may order extra work or make changes by altering, adding or deducting from the work without invalidating the Contract. All such work shall be executed under

the conditions of the original Contract except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such change.

In giving instructions, no extra work or change shall be made unless said order is written, except in an emergency endangering life and property. (See ART. 10) Prior to the execution of any written change order the value of such extra work shall be determined in writing in one of the following ways.

(A) By estimate or acceptance in a lump sum.

(B) By unit prices named in the Contract or subsequently agreed upon.

(C) By cost and percentage or by cost and a fixed fee.

It is understood that the Owner reserves the right to have any extra work done by any person, persons, or corporation other than the Contractor if an agreement upon the prices to be paid for such extra work cannot be promptly reached between the Owner and the Contractor. The Contractor agrees to make no claim for damages or for any privileges or rights other than that provided in the Contract by reason of such work by others.

Any extra work done by the Contractor shall be included in the monthly estimates.

ART. 13 TIME OF COMPLETION

The work contemplated under this Contract shall be completed within 120 days of contract award. The Contractor shall commence the work not later than 20 calendar days after the execution of the Contract. The completion time shall include, but not be limited to, the time necessary to prepare shop drawings, to order, process, and deliver all equipment and materials, to obtain necessary permits and approvals, to perform the proper installation contemplated under this contract and all else necessary and incidental in connection with the performance of this Contract.

If the Contractor fails to complete the work within the specified time plus extensions, the Contractor shall be responsible to the Owner as liquidated damages for the sum of \$1,500.00 per day (Saturdays, Sundays, and legal holidays excepted) for every day thereafter until the completion and acceptance of work. Such liquidated damages shall not be considered as a penalty. The Owner shall deduct and retain out of any money due or to become due hereunder the amount of the liquidated damages.

ART. 14 MONTHLY ESTIMATES

Upon receipt of an invoice from the Contractor with supporting documentation as required, the Engineer shall prepare a monthly estimate for partial payment to the Contractor not later than the third day of each month. No later than the last day of the month, the Owner will attempt to make partial payment to the Contractor on the basis of the Engineer's estimate. All such payments shall be considered tentative only, subject to correction in any subsequent estimate, and need not be based on accurate measurement. These payments are to be made purely to allow the Contractor to meet his current bills and for no other purpose. The Owner will retain ten percent of the amount of each partial payment for contracts up to \$100,000 and two percent for contracts in excess of \$100,000, until substantial completion.

In the preparation of the monthly estimates, no allowance will be made for materials until said materials have been incorporated in the work.

ART. 15 WITHHOLDING OF PAYMENT

The Owner may withhold payment for the following:

- (A) Defective work not corrected.
- (B) Claims filed or responsible evidence indicating probability of filing claims.
- (C) Failure of the Contractor to make proper payments to subcontractor or for material or labor.
- (D) Unpaid damages by the Contractor to subcontractors, the Owner or any other agency or person.
- (E) Failure of the Contractor to submit certified payroll records.

ART. 16 FINAL ESTIMATE AND FINAL PAYMENT

Upon completion of all work, except maintenance, the Engineer shall file with the Owner a final estimate stating, from actual measurements or observation, the entire amount of work performed and compensation earned by the Contractor. Final payment will not be released until the maintenance bond or cash is submitted and approved by the Owner and the Contractor agrees to the final estimate and affixes his signature thereto. The Owner reserves the right to disregard claims for compensation submitted by the Contractor after the date of the final estimate. The date of final acceptance of the work shall be the date when the final payment is ordered paid by the Owner.

The acceptance of the final payment by the Contractor shall be and operate as a release for all things done or furnished in connection with this work and for every act of the Owner. This payment shall not operate to release the Contractor or his Sureties from any obligation under this Contract.

ART. 17 MAINTENANCE

Before final payment is made, the Contractor shall furnish a Surety Corporation Maintenance Bond to the Owner in a sum equal to 15 percent of the final contract amount and such Bond shall remain in full force and effect for a period of two years from the date of acceptance of the work. The Bond shall provide that the Contractor guarantees to replace, during the two year period, any defective material or damage of the work to the satisfaction of the Engineer without cost to the Owner.

If during the two year period, any work should be found to be defective, the Owner shall order, in writing, the repair of such work. The repairs shall be undertaken within twenty four hours of the written notice and work shall be continuous, during regular working hours, until the replacement or repair is completed. If the Contractor fails to perform or fails to continue to perform the necessary repair the Owner may cause such work to be corrected and the cost thereof shall be paid by the Contractor or his Surety before the Bond will be released.

The Contractor is not obligated to repair any work that he may prove, to the satisfaction of the Engineer, has resulted from abuse of the work by parties other than the Contractor.

If the Owner puts to use any portion of the work prior to the final payment, the maintenance period for such portion of the work shall still be considered from the date of acceptance.

ART. 18 DEFECTIVE WORK

The Contractor, without compensation, shall promptly remove from the site, all materials condemned by the Engineer, and shall promptly replace and re-execute any work found to be defective by the Engineer prior to the final payment. The Contractor shall not be relieved of his obligation to remove unsuitable materials or correct defective work even though such work and materials have been previously inspected or estimated for monthly payment.

If the Contractor shall fail or neglect to replace any defective work or to discard condemned materials within ten working days after written notice, the Owner may cause such defective work to be replaced or the condemned materials to be discarded, and acceptable materials provided, and the expense thereof shall be deducted from the amount to be paid to the Contractor. An itemized list of expenses incurred by the Owner shall be submitted to the Contractor with the next monthly payment.

The Contractor is responsible to correct all defective work regardless of whether payment has been made and/or accepted by the Engineer.

ART. 19 CLAIMS FOR EXTRA COST

If the Contractor claims that any instructions, be they drawings or otherwise, involve extra cost under this Contract, he shall give written notification to the Engineer within forty-eight hours after the receipt of such instructions. In any event, before proceeding to execute the work, the Contractor shall meet with the Engineer to afford the opportunity to modify the design or construction procedure, to establish the validity and the value of the claim as provided in ART. 12, Changes in the Work.

If the Contractor claims compensation for any alleged damages sustained by reason of acts of the Owner, or its agents, the Contractor shall immediately notify the Engineer so that a proper appraisal can be made. Within five days thereafter, the Contractor shall submit to the Engineer a written statement as to the nature of the damage and an itemized statement of the amount claimed for such damage. No such claims shall be valid or entitled to payment unless as hereinbefore specified.

Work under this contract shall not be terminated or delayed during any discussions or negotiations related to claims for extra cost.

ART. 20 LINE AND GRADE

Unless otherwise stated in the specifications, the Contractor shall stake out such lines and grades as necessary in order to perform the work. The Contractor shall transfer the line and grade far enough in advance of the immediate work area to detect any errors or omissions that may exist. It shall remain the Contractor's responsibility to detect and report such errors or omissions to the Engineer immediately.

ART. 21 PUBLIC UTILITIES

Special utility provisions as well as a list of all corporations, companies, agencies or municipalities owning or controlling the utilities in the vicinity of the project site is given in Appendix B.

The Contractor shall contact in writing, all agencies which may have utilities located in the area of work prior to commencement of construction and a copy of such notification shall be forwarded to the Engineer. A meeting of all utility company officials with the Contractor and Engineer shall be arranged by the Engineer to eliminate any possible misunderstandings or confusion during construction.

Upon completion of the work, the Contractor shall obtain a written statement from the various utility companies stating that all manholes or valve boxes within any newly paved area under this contract are free of any foreign matter and can be readily opened.

ART. 22 CHATTEL MORTGAGES

No materials, equipment, or supplies for the work shall be purchased by the Contractor or by any subcontractor subject to any chattel mortgage or under a conditional sale or other agreement by which an interest is retained by the seller. The Contractor warrants that he has clear title to all materials and supplies used by him in the work.

ART. 23 INSURANCES

The Contractor shall maintain during the life of the contract, insurance policies of the type and with the minimum limits indicated below and in a form satisfactory to the Owner. The Contractor shall provide a certified copy of the policies and/or certificates of insurance satisfactory to the Owner prior to commencement of work.

A) Policy and Limit Guidelines as follows:

- 1) Workers Compensation insurance in accordance with laws of the State of New Jersey and other states where work is being performed. The Contractor shall also have and maintain Employers Liability Insurance as well as USL&H and Jones Act coverage where applicable.
- 2) Commercial General Liability insurance coverage, written on an occurrence basis, and must not be altered by any endorsements limiting coverage. Limits of liability shall not be less than the following:

\$2,000,000	General Aggregate per location/per job
\$2,000,000	Products/Completed Operations
\$1,000,000	Personal Injury and Advertising Injury Limit
\$1,000,000	Each Occurrence Combined Single Limit for Bodily Injury and Property Damage

The coverage shall include:

- a) Premises/Operations
- b) Independent Contractors

- c) Contractual liability covering liability assumed under the indemnification provision contained in this Agreement and deleting any third-party beneficiary exclusion.
 - d) Broad form property damage liability including completed operations.
 - e) Coverage for liability arising from explosion, collapse and underground damage, if blasting or excavation is to be done.
 - f) Personal injury coverage, including coverage for liability arising from false arrest, malicious prosecution, willful detention, libel, slander, defamation of character, invasion of privacy and wrongful egress or entry.
 - g) Products and completed operations for a period of two (2) years from substantial completion.
 - h) Limited Pollution Cleanup at a limit of \$100,000 for construction projects over \$500,000.
 - i) Environmental Liability at a limit of \$1,000,000.
- 3) Comprehensive Automobile Liability insurance covering the use of all owned, non-owned, hired or leased automobiles with limits of liability not less than \$1,000,000 combined single limit for bodily injury and property damage. Coverage should include uninsured and underinsured motorist at limits no less than the minimum statutory limits.
 - 4) Owners Protective Liability policy (OCP) with minimum limits of \$1 million. The policy "Named Insured" would be the municipality as Owner. The policy would also show the Contractor as "Designated Contractor". This policy will protect the Named Insured (the Owner) for the negligent acts of the Designated Contractor (Contractor).
 - 5) Umbrella Liability insurance policy written on an occurrence basis with a minimum combined single limit of "see below" as "Follow Form" excess of the Contractor's Employer's Liability, Commercial General Liability and Comprehensive Automobile Liability insurance policies required herein. Coverage to include on site limited pollution. The OCP policy as required in Item #4 should be an underlying policy.

<u>Project Cost</u>	<u>Umbrella Limit</u>
\$50,000 And Below	\$1,000,000
Over \$50,000 to \$500,000	\$3,000,000
Over \$500,000 to \$1,000,000	\$5,000,000
Over \$1,000,000	\$10,000,000

B) Policy and Limit Guidelines as follows:

- 1) Certified copies of all insurance policies provided above or certificates thereof satisfactory to the Owner shall be furnished forthwith. Each such policy or certificate shall contain a provision that it is not subject to change or cancellation unless 30 days prior written via certified mail/return receipt shall have been given to the Owner by the

Contractor's Insurer. These must be received 30 days prior to commencement of work.

- 2) The Contractor agrees that it will defend, indemnify and save harmless the Owner, its officers, agents, employees and engineer from and all liability, suits, actions, and demands and all damages, costs or fees on account of injuries to persons or property, including accidental death, arising out of or in connection with the work, or by reason of the operations under this agreement.
- 3) All insurance purchased and maintained by the Contractor shall designate the Owner, their officers, officials, agents, employees, Engineers, consultants as additional insureds.
- 4) Except as modified by the Owner in writing, the insurance requirements herein shall also apply to Subcontractors and to the Sub-Subcontractors and the Contractor will be responsible for supervision of the filing of certified copies of the insurance policies and/or insurance certificates prior to any Subcontractor commencing work on the project.
- 5) The Owner shall maintain Property insurance upon the entire work at the site. The insurance shall insure against the perils as provided by its general insurance carrier and its excess insurer.
- 6) The Owner and Contractor waive all rights against (1) each other and the Subcontractors, Sub-Subcontractors agents and employees each of the other, and (2) the architect and separate Contractors, if any, and their Subcontractors, Sub-Subcontractors, agents and employees for damages caused by fire or other perils to the extent covered by insurance obtained pursuant to Paragraph 5 or any other property insurance applicable to the work except such rights as they may have to the proceeds or such insurance held by the Owner. The Owner or the Contractor, as appropriate, shall require the architect, separate Contractors, Subcontractors, and Sub-Subcontractors by appropriate agreements, written where legal required for validity, similar waivers, each in favor of all parties enumerated in the Subparagraph 6.
- 7) All insurance coverage evidenced by the Contractor in accordance with this contract shall be from A.M. Best's rated A-X or better Insurance Company licensed to do business in the State of New Jersey.
- 8) All proof of insurance submitted to the municipality shall clearly set forth all exclusions and deductible clauses. The Owner will allow certain deductible clauses which are not considered excessive, overly broad, or harmful to the interest of the Owner. Standard exclusions will be allowed of any additional exclusions. This will be at the discretion of the Owner. Regardless of the allowance of exclusions or deductions by the Owner, the Contractor shall be responsible for the deductible limit of this policy and all exclusions consistent with the risks he assumes under this contract and as imposed by law.

In the event that the Contractor provides evidence of insurance in the form of certificates of insurance, valid for a period of time less than the period during which the Contractor is required by the terms of this

contract to maintain insurance, said certificates are acceptable, but the Contractor shall be obligated to renew its insurance policies as necessary and to provide new certificates of insurance so that the Owner is continuously in possession of evidence of the Contractor's insurance in accordance with the foregoing provisions.

In the event the Contractor fails or refuses to renew its insurance policy, or the policy is cancelled, terminated or modified so that the insurances do not meet the requirements of this subsection, the Owner may refuse to make payment of any further moneys due under this contract or refuse to make payment of moneys due or coming due under other contracts between the Contractor's insurance for the periods and amounts referred to above. Alternately, the Owner may default the Contractor and direct the surety to complete the project. During any period when the required insurance is not in effect, the Owner may suspend performance of the contract. If the contract is so suspended, additional compensation or extension of contract time is not due on account thereof.

ART. 24 WORK BY OTHERS

The Owner reserves the right to do any work which may connect with, become part of or be adjacent to the work embraced in this contract, at any time, by contract or otherwise.

The Contractor shall not interfere in any way with such other Contractor or person or persons which the Owner may employ and shall suspend such part, or all of his work, or shall prosecute the same in a manner, as may be ordered, to afford all reasonable facilities for doing such other work. Where the Contractor cannot agree as to who has precedence in any location, the decision shall rest with the Engineer, whose determination shall be final and conclusive. Any time lost, due to the work by others, shall not be just cause for additional compensation by the Contractor.

ART. 25 RIGHT OF OWNER TO DECLARE CONTRACTOR IN DEFAULT

The Owner has the right to declare the Contractor in default under the following circumstances:

- (A) If the Contractor fails to begin the work within the required time.
- (B) If the work to be done under this Contract is abandoned.
- (C) If the Contractor is adjudged bankrupt or makes an assignment for the benefit of creditors.
- (D) If the Contractor fails to or refuses to regard laws, ordinances, regulations, and such orders as given by the Owner or Engineer with respect to the work.
- (E) If the Contractor, after notice from the Engineer, refuses or fails to supply enough properly skilled workmen or proper materials or equipment.
- (F) If the Contractor violates any of the provisions of this Contract or shall not perform the same in good faith.
- (G) If the Contractor refuses or fails to prosecute the work or any part thereof with such diligence as will insure the work's completion within the specified period (or any duly authorized extension) or fails to complete the work within the prescribed period.

- (H) If the Contractor fails to make prompt payment to person supplying labor or materials for the work.
- (I) If the Contractor assigns or sublets the work otherwise than as specified.
- (J) If the Engineer is of the opinion, and certifies in writing, that the work or any part thereof is unnecessarily or unreasonably delayed, or that the Contractor is not complying with the orders of the Engineer, or that sufficient workmen, materials, plant, tools, supplies, safety standards, or other means of carrying on the work are not provided to carry out all the requirements of the Contract.
- (K) Failure of the Contractor or Subcontractor to pay required wage rates.

The Owner shall serve written notice to the Contractor ordering the Contractor not to begin, or not to resume, or to discontinue all work under this Contract for any of the above stated reasons.

The Owner may then enter upon and take possession of the work, or any part thereof, and by purchase of necessary materials and equipment, by and/or direct employment of labor complete the work; or the Owner may cause the work to be completed by other persons by contract without advertising; or the Owner may re-advertise and re-let the uncompleted portions of the work and all expenses or financial loss to the Owner by reason of any of the above methods for completing the unfinished work shall be deducted out of monies then due, or to become due to Contractor under this Contract.

In case such expense shall exceed the amount which would have been payable under this contract if the same had been completed by the Contractor, the Contractor or his sureties shall pay the amount of such excess to the Owner.

Should such expense be less than the amount payable under this Contract, had the same been completed by the Contractor, he shall receive the difference after deducting the amount retained as herein before or hereinafter specified.

All the work undertaken by the Owner, by contract or otherwise, shall be certified by the Engineer as to the amount of work done, the cost and amount of excess cost, if any. Such certification shall be binding and conclusive upon the Contractor, his sureties, successors, assigns or liens.

In case this Contract, or any alterations or modifications thereof be thus terminated, the decision of the Owner shall be conclusive, and said Contractor shall not be allowed to claim or receive any compensation or damages for not being allowed to proceed with the work.

ART. 26 REMOVAL OF EQUIPMENT

In case of termination of work, from any cause whatever, prior to completion, the Contractor shall promptly remove any part or all of his equipment and supplies from the work. If such removal is not completed within five working days after written notification by the Owner, the Owner shall have the right to remove such equipment and supplies at the expense of the Contractor.

ART. 27 CONTRACTOR'S RIGHT TO TERMINATE WORK

If the work shall be stopped by order of the court or any other public authority for a period of three months without act or fault of the Contractor or of any of his agents, servants, employees, or subcontractors, the Contractor may, upon ten days notice to the Owner, discontinue performance of the work and/or terminate the Contract, in which event the liability of the Owner to the Contractor shall be determined as provided hereinbefore except that the Contractor shall not be obliged to pay to the Owner an excess of the expense of completing the work over the unpaid balance of the compensation to be paid the Contractor.

ART. 28 SUSPENSION OF WORK

The Owner, on account of public necessity, adverse weather conditions, or other reasons, may order all or any part of the work suspended, and thereupon, the Contractor shall neatly pile up all materials, provide and maintain walks and crossings and take other means to properly protect the work. In case of stoppage of work, the time allowed for the completion of the work shall be extended in an amount equal to that lost by the Contractor in such manner, but the Contractor shall be entitled to no claims for damages. Under no circumstances shall the materials be used which have been affected by the weather.

ART. 29 POWERS OF THE ENGINEER

The Engineer or its designee shall make all necessary explanations as to the meaning and intent of the Contract Documents, shall give all orders and directions contemplated under the Contract. The Engineer or its designee shall determine in all cases the quantity, quality, and acceptability of the several kinds of work and materials and shall determine all questions in relation to the work and construction thereof.

In case there is any inconsistency or ambiguity in the Contract Documents brought to his attention by the Contractor, the Engineer shall base his decision upon the premise that the more stringent interpretation was made by the Contractor in the submission of his bid. The Engineer shall decide any difference or conflicts which may arise between the Contractor and other contractors of the Owner in regard to their work.

Should the Contractor take exception to any determination made by the Engineer relating to this Contract, the Contractor shall within ten calendar days after receiving notification of such decision, file with the Owner a written notice appeal together with a full statement of facts as he believes them to be true. A copy of said notice and statement of facts shall be furnished to the Engineer.

ART. 30 DISPUTES

In accordance with N.J.S.A. 40A:11-50 (PL 1997 c371) no disputes, as defined in the said statute shall be submitted to a Court for adjudication unless the dispute has first been submitted to non-binding mediation. This provision shall not apply to disputes concerning the bid solicitation or award process, or to the formation or subcontracts to be entered into pursuant to PL 1971 c198 (C40A:11-1 et seq.) nor shall this provision prevent the contracting unit from seeking injunctive or declaratory relief in Court at anytime.

ART. 31 UNAUTHORIZED WORK

Work done without lines and grade being given, work done beyond the lines and grades shown on the drawings or as given, or any extra work done without a written authorization will be considered unauthorized. Such work will be at the expense of the Contractor and will not be paid for by the Owner. Work so done, may be ordered removed and/or replaced by the Engineer at the Contractor's expense.

ART. 32 MAINTENANCE OF TRAFFIC

The Contractor shall provide for and maintain local vehicular traffic during construction operations wherever feasible. At no time shall he close off any street by barricading or other methods without the prior consent of the Owner. If and when it becomes necessary to close the street to the normal flow of traffic, the Contractor shall notify the Police Department, Fire Department and the Engineer, and shall at all times provide ingress and egress for emergency services as provided by the aforesaid departments.

Detour routes, if approved by the Engineer, must be adequately and fully marked by the Contractor for the entire length of the detour.

ART. 33 EROSION AND SEDIMENTATION CONTROL

The Contractor shall schedule and conduct the work exercising such precautions as necessary to prevent and/or reasonably minimize the pollution or contamination of stream and other waters with sediment or other harmful materials. Wherever construction exposes work which is subject to erosion, the extent of such exposures in advance of subsequent construction shall be subject to the approval of the Engineer. Erosion control features or other work to be completed within such areas shall follow as soon after exposure as practicable.

Construction of drainage facilities as well as performance of other contract work which will contribute to the control of siltation shall be carried out in conjunction with earthwork operations, including borrow pit operations, or as soon thereafter as is practicable.

During construction, the Contractor shall shape the top of earthwork so as to effect the drainage of rainwater and to prevent the flow of runoff over the slopes except at locations selected or approved by the Engineer. If and where the Engineer so directs, temporary slope drains shall be constructed to carry the runoff.

The erosion control measures described herein shall be continued until the grass on seeded slopes is sufficiently established to be an effective erosion deterrent.

Unless otherwise approved in writing by the Engineer, construction operations in rivers, streams and impoundments should be restricted to those areas where channel changes are shown on the plans and to those areas which must be entered for the construction of temporary or permanent structures. Rivers, streams and impoundments shall be promptly cleared of all falsework, piling, debris, or other obstructions placed therein or caused by the construction operations.

Excavation from the roadway, channel changes, cofferdams, etc., shall not be deposited in or so near to rivers, streams or impoundments so that it will be washed away by high water or runoff.

Each 5,000 square feet of cut face of earth excavation and/or fill for roadway slopes will be treated to establish a temporary vegetative cover as described in the "Standards for Soil Erosion and Sedimentation Control in New Jersey" immediately after the completion of excavation and/or embankment operations in the same area. All work must also be in accordance with the local Soil Conservation District. The Contractor shall notify the District in writing at least 48 hours in advance of any land disturbance activity.

Unless otherwise stated in the technical specifications, no separate payment will be made to the Contractor for soil erosion and sedimentation control measures and the cost for soil erosion and sediment control measures will be included in the bid price of various items in the Proposal.

ART. 34 FINAL CLEAN UP

Before final acceptance of the work, the Contractor shall remove all equipment, temporary work, unused and useless materials, rubbish; shall leave the ground and adjacent property in a neat and satisfactory condition; shall remove all obstructions from waterways caused by his operations; and shall clean all new and existing storm water drains within and adjacent to the work which have been obstructed by the Contractor.

ART. 35 LIENS

The Contractor agrees that he will furnish the Owner with satisfactory evidence that all persons who have done work or furnished materials under this agreement and are entitled to a lien, therefore, have been fully paid off and are no longer entitled to such lien. The Owner may withhold payment in the event claims are filed or it has reasonable evidence indicating the probability of claims being filed.

ART. 36 COMPLIANCE WITH LABOR STATUTES AND RULES

The Contractor agrees to comply with all the laws of the State of New Jersey regarding labor and compensation with all labor statutes, rules, regulations, and ordinances applicable and having the force of the law. The Contractor in matters of non-discrimination agrees that:

- (A) In the hiring of persons for the performance of work under this Contract or any subcontract hereunder, or for the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under this Contract, no Contractor, nor any person acting on behalf of such Contractor or subcontractor, shall, by reason or race, creed, color, national origin, or ancestry, discriminate against any person who is qualified and available to perform the work to which the employment relates.
- (B) No Contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employees engaged in the performance of work under this Contract or any subcontract hereunder, or engaged in the procurement, manufacture, assembling or furnishing of any such Contract on account of race, creed, color, national origin, or ancestry.
- (C) There may be deducted from the amount payable to the Contractor by the contracting public agency, under this Contract, a penalty of \$50.00 for each

person for each calendar day during which such person is discriminated against or intimidated in violation of the provision of the Contract.

- (D) This Contract may be cancelled or terminated by the contracting public agency, and all money due or to become due hereunder may be forfeited, for any violation of this section of the Contract occurring after notice of the Contractor from the contracting public agency of any prior violation of the section of the Contract.
- (E) The Contractor agrees to comply with all State statutes, rules and regulations dealing with minimum wage rates and failure to do so shall subject the Contractor to forfeiture of the contract or other penalties imposed by law.
- (F) Contractors are responsible for subcontractor compliance.
- (G) The Contractor shall instruct his personnel to follow all safety regulations of the Occupational Safety and Health Administration (OSHA) and officials of the State of New Jersey Department of Labor and Industry. The Contractor is forewarned that the regulatory agencies could impose a work stoppage if their representatives inspect the Contract work and discover that safety precautions mandated by the agencies have been violated.
- (H) In the case of projects with contracts exceeding \$50,000 that are part of the project, the Contractor shall have an Affirmative Action Plan. The form AA-201B and/or others as it may be required by the Affirmative Action Office shall be completed by the Contractor and furnished to the Owner and the Affirmative Action Office no later than three (3) days after the Contractor signs the Contract.

ART. 37 AMERICAN GOODS AND PRODUCTS

The Contractor shall comply with any and all "Buy American" requirements of Federal and State law, including N.J.S.A. 40A:11-18 which provides that only manufactured products of the United States, wherever available, be used.

ART. 38 EQUIPMENT

All microprocessor based equipment on this project shall be date-sensitive, date-compliant and Year 2000 compliant.

ART. 39 CONTRACT CLAUSES

Grantees or subgrantees recipients entering into contracts for construction, alterations, or repair of any public building or public work project subject to the prohibitions described in this Notice shall include the following provisions in all such contracts:

Restrictions on Public Buildings and Public Works Projects.

- (A) Definitions.

"Component," as used in this clause, means those articles, materials and supplies incorporated directly into the project." Contractor or subcontractor of a foreign country or is controlled directly by citizens or nationals of a foreign country. A Contractor or subcontractor shall be considered to be a citizen or national of a foreign country or controlled indirectly by citizens or nationals of a foreign country.

- 1) If 50 percent or more of the Contractor or subcontractor is owned by a citizen or a national of the foreign country:
- 2) If the title to 50 percent or more of the stock of the Contractor or subcontractor is held subject to trust or fiduciary obligation in favor of citizens or nationals of the foreign country:
- 3) If 50 percent or more of the voting power in the Contractor or subcontractor is vested in or exercisable on behalf of a citizen or national of the foreign country:
- 4) In the case of a partnership, if any general partner is a citizen of the foreign country:
- 5) In the case of a corporation, if its president or other chief executive officer or the chairman of its board of directors is a citizen of the foreign country or the majority of any numbers of its directors necessary to constitute a quorum are citizens of the foreign country or the corporation is organized under the laws of the foreign country or any subdivision, territory, or possession thereof: or
- 6) In the case of a Contractor or subcontractor who is a joint venture, if any participant firm is a citizen or national of a foreign country or meets any of the criteria in subparagraphs:
 - (a) (1) through (5) of this clause.

"Product", as used in this clause, means construction materials - i.e., articles, materials, and supplies brought to the construction site for incorporation into the public works project, including permanently affixed equipment, instruments, utilities, electronic or other devices, but not including vehicles or construction equipment. In determining the origin of a product [insert name of grantee] will consider a product as produced in a foreign country if it has been assembled or manufactured in the foreign country exceed 50 percent of the cost of all its components.

(b) Restrictions.

The Contractor shall not (1) knowingly enter into any subcontract with a subcontractor of a foreign country included on the list of countries that discriminate against U.S. firms published by the United States Trade Representative (see paragraph (c) of this clause), or (2) supply any product under this contract of a country included on the list of foreign countries that discriminate against U.S. firms published by the USTR.

(c) USTR List

The USTR published an initial list in the Federal Register on December 30, 1987 (53 FR 49244), which identified one country - Japan. The USTR can add other countries to the list, or remove countries from it, in accordance with Section 109(c) of Pub. L 100-202.

(d) Certification

The Contractor may rely upon the certification of a prospective subcontractor that it is not a subcontractor of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR and that products supplied by such Contractor for use on the Federal public work project under this contract are not

products of a foreign country included on the list of foreign countries that discriminate against U.S. firms published by the USTR, unless such Contractor has knowledge that the certification is erroneous.

(e) Subcontractors

The Contractor shall incorporate this clause, modified only for the purpose of properly identifying the parties in all subcontracts. This paragraph (e) shall also be incorporated in all subcontracts.

ART. 40 PUBLIC WORKS CONTRACTOR REGISTRATION ACT

The Contractor shall comply with the requirements of the Public Works Contractor and Registration Act for the State of New Jersey known as the P.L. 1999.c238 (NJSA 34:11-56.48). In accordance with the requirements of this Act, the Contractor shall submit with the bid a copy of its Public Works Contractor Registration Certificate as well as a copy of the certificates for its named subcontractors.

SCOPE OF WORK

**SCOPE OF WORK
FARM ROAD PARK
TOWN OF SECAUCUS
HUDSON COUNTY, NEW JERSEY**

The work to be performed under this contract includes the construction of a dog park along the Hackensack River. All NJDEP permits and Soil Conservation approvals will be provided by the Town to the lowest bidder upon award of contract.

Principal items of work in the project include:

430 L.F.	6' Tall Fence
810 S.Y.	Dog Park Gravel Base
430 S.Y.	Walkways
900 S.Y.	Asphalt Area
1 Unit	Headwall
4 Unit	Inlets
250 L.F.	12" Reinforced Concrete Pipe
10 L.F.	15" Reinforced Concrete Pipe
L.S.	Bioretention Basin
L.S.	Plantings
10 S.F.	Riprap Apron, 12" Thick (D50=6")
L.S.	Lighting and Electrical

Alternative bid item:

L.S.	30' Pavilion
707 S.F.	Pavilion Foundation

Unless otherwise specifically noted, all work is to be in compliance with the New Jersey Department of Transportation, 2019 Standard Specifications for Road and Bridge Construction, as amended.

All work is to be inspected, by a representative of the Engineer. Quantity tickets will be collected by a representative of the Engineer, at the time of delivery of the specific load only. No tickets will be accepted, for any quantities of materials at any other time. Volume items will be measured within the prescribed pay limits indicated on the Contract Drawings.

Milled material, if directed, shall be designated for recycling and transported to an approved recycling center. Tonnage of milled material shall be certified to the Owner and the Owner's recycling coordinator.

The Contractor shall be responsible for the construction stakeout/layout. **The construction stakeout/layout shall be performed by a qualified New Jersey licensed professional land surveyor.**

AGREEMENT

FARM ROAD PARK AGREEMENT

This Agreement made on the _____ day of _____ by and between the Town of Secaucus in the County of Hudson, in the State of New Jersey, party of the first part, hereinafter called the Owner and _____ party of the second part, hereinafter called the Contractor.

Witnesseth: That the Contractor, for and in consideration of the sum or sums hereinafter mentioned to be paid, as hereinafter expressed by the Owner, does hereby covenant, promise and agree, and for the Contractor's heirs, personal representative, successors, and assigns does promise and agree, to and with the Owner as follows:

1. That the Contractor will agree to furnish and deliver all materials to do and perform all the work and labor required in and about said project as indicated in the accompanying proposal, all in accordance with the Contract Documents, specifications, and affirmative action requirements which are annexed hereto and deemed to a part of this Agreement and further, that the Contractor will perform said work as and then ordered by the engineer and prosecute the same diligently to conclusion and complete the same within the time specified in the General Conditions of the Contract. The Contractor will commence the work not later than 20 calendar days after the execution of the contract.
2. And it is further agreed by and between the parties hereto, that if the Contractor shall omit, fail, neglect or refuse to commence, prosecute or to complete said work as aforesaid, or in case further time be granted for the commencement and completion of said work, and the said Contractor shall omit, fail, neglect or refuse to commence, prosecute or complete said work within the time granted, or if the Contractor shall cease operations under this Contract at any time, for the space of ten (10) calendar days without the approval of the Engineer, that then, in any such event, the Governing Body of the Owner, or the Engineer in its behalf, shall have the full privilege, authority and power, if the Governing Body shall so elect, to cause the said work to be done and completed without interference, opposition, or hindrance of or by the Contractor; provided, the Governing Body shall give to the Contractor or its sureties notice in writing of the intention to do so, by mailing such notice in an envelope, with postage prepaid, addressed to the Contractor, under, in and by this Contract, shall cease and be void, and the Contractor shall receive no further benefit, pay or remuneration thereunder; and the Contractor and/or its sureties shall be liable for any and all sums of money which the Owner shall or may pay or expend for fully completing and maintaining said work, over and above the amount which the Contractor would have been entitled to receive, had the Contractor completed and maintained the work under the Contract according to its terms and conditions, and all loss or damage may result to the Owner by reason of the omission, failure, or refusal of said Contractor to commence, prosecute and maintain said work as aforesaid.
3. And it is further agreed by and between the parties hereto, that whenever damages are imposed by the terms of this Contract for failure, neglect or default of the Contractor in the performance of this contract, this amount thereof when incurred by the Owner, may be deducted and withheld from any money to become due upon this Contract, and when so deducted and withheld shall be deemed and taken as payment by the Contractor to that extent.
4. And it is further agreed by and between the parties hereto, that the time is of the essence of this contract, and that if the contract work is not fully completed within the time limit for its completion in accordance with ART. 13 of the General Conditions of the Contract, the Contractor shall pay to the Owner for each day, Saturdays, Sundays

and Holidays excepted and such time as the prosecution of the work is stopped by written direction of the Governing Body or its authorized agent that shall or may elapse after the time so limited for its completion, until its final and full completion and acceptance by the Owner the sum of \$1,500.00 per day, Saturdays, Sundays and Holidays excepted, as liquidated damages.

5. The Contractor agrees to carry adequate policy or policies of insurance in accordance with ART. 23 of the General Conditions of the Contract, as will indemnify him and the Owner and the Engineer from any liability imposed by law as a result of any act or omission of the Contractor, his agents, servants or employees from the time of the commencement of the work hereunder; such policy or policies of insurance shall be subject to inspection by the properly authorized agent, servant or employee of the Owner.
6. The Contractor further agrees that prior to the payment to him by the Owner of the Contract Sum hereinafter set forth, the Contractor will furnish to the properly authorized agent, servant or employee of the Owner satisfactory evidence of the payment by the Contractor of all obligations incurred by the Contractor, resulting from the order or purchase of materials by the Contractor, charges for labor or obligations upon any subcontractor or contract which the Contractor may list.

The Contractor agrees to indemnify and save harmless the Owner from any claims, demands, actions, or causes of action which may be presented to or asserted against the Owner as a result of any act or omission by the Contractor in the performance of the work hereunder, or in violation by the Contractor of any duty imposed upon the Contractor by law.

It is hereby mutually agreed that the Owner is to pay and the Contractor is to receive as full compensation for furnishing all materials and labor in building, constructing and testing, and in all respects completing the work herein described and appurtenances thereto in the manner and under the conditions herein specified, the various unit prices stipulated in the Proposal hereto annexed.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement this day and year as first above written.

TOWN OF SECAUCUS

By_____

(SEAL)

ATTEST:

By_____

Contractor

ATTEST/WITNESS:

By_____

By_____

Bond No _____

PERFORMANCE/LABOR MATERIAL BOND

KNOW ALL MEN BY THESE PRESENTS THAT we, the undersigned as Principal, and the _____, a corporation organized and existing under the laws of the State of New Jersey and duly authorized to do business in the State of _____, as Surety, are held and firmly bound unto _____ as Obligee in the penal sum _____ (\$ _____) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the above-named Principal did on the _____ day of _____, 20____, enter into a contract with _____ which contract is made part of this bond the same as though set forth herein:

NOW, if the said _____ shall well and faithfully do and perform the things agreed by them to be done and performed according to the terms of said Contract, and shall pay all lawful claims of beneficiaries as defined by N.J.S.A. 2A:44-143 for labor performed or materials, provisions, provender or other supplies or teams, fuel, oils, implements, or machinery furnished, used or consumed in the carrying forward, performing or completing of said Contract, we agreeing and assenting that this undertaking shall be for the benefit of any beneficiary as defined in N.J.S.A. 2A:44-143 having a just claim, as well as for the Obligee herein; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated;

The said Surety hereby stipulates and agrees that no modifications, omissions or additions in or to the terms of the said Contract; or in or to the plans or specifications therefore, shall in any way affect the obligation of said Surety on its bond.

This bond is given in compliance with the requirement of the statutes of the State of New Jersey in respect to bonds or contracts on public works. Revised Statutes of the State of New Jersey, N.J.S.A. 2A:44-143 to 2A:44-147, both inclusive, and liability hereunder is limited as in said statutes provided.

SIGNED, SEALED AND DATED this _____ day of _____ 20_____

Witness: _____
(If Individual)

(Principal)

Attest: _____
(If Corporation)

Attest: _____

By _____

Official Use Only

STATE OF NEW JERSEY
DIVISION OF CONTRACT COMPLIANCE
EQUAL EMPLOYMENT OPPORTUNITY IN PUBLIC CONTRACTS

Assignment

Code

FORM AA-201

Revised 10/03

INITIAL PROJECT WORKFORCE REPORT CONSTRUCTION

READ INSTRUCTIONS ON THE BACK CAREFULLY BEFORE THE COMPLETION AND DISTRIBUTION OF THIS FORM.
PLEASE TYPE OR PRINT IN BLACK OR BLUE INK.

1. FID NUMBER	2. CONTRACTOR ID NUMBER	5. NAME AND ADDRESS OF PUBLIC AGENCY AWARDED CONTRACT	
3. NAME AND ADDRESS OF PRIME CONTRACTOR		CONTRACT NUMBER DATE OF AWARD DOLLAR AMOUNT OF AWARD	
(Name)		6. NAME AND ADDRESS OF PROJECT	
(Street Address)		7. PROJECT NUMBER	
(City) (State) (Zip Code)		COUNTY	
4. IS THIS COMPANY MINORITY OWNED [] OR WOMAN OWNED []		8. IS THIS PROJECT COVERED BY A PROJECT LABOR AGREEMENT (PLA)? <input type="checkbox"/> YES <input type="checkbox"/> NO	

9. TRADE OR CRAFT	PROJECTED TOTAL EMPLOYEES				PROJECTED MINORITY EMPLOYEES				PROJECTED PHASE - IN DATE	PROJECTED COMPLETION DATE
	MALE		FEMALE		MALE		FEMALE			
	J	AP	J	AP	J	AP	J	AP		
1. ASBESTOS WORKER										
2. BRICKLAYER OR MASON										
3. CARPENTER										
4. ELECTRICIAN										
5. GLAZIER										
6. HVAC MECHANIC										
7. IRONWORKER										
8. OPERATING ENGINEER										
9. PAINTER										
10. PLUMBER										
11. ROOFER										
12. SHEET METAL WORKER										
13. SPRINKLER FITTER										
14. STEAMFITTER										
15. SURVEYOR										
16. TILER										
17. TRUCK DRIVER										
18. LABORER										
19. OTHER										
20. OTHER										

I hereby certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements are willfully false, I am subject to punishment.

(Signature)

10. (Please Print Your Name) _____ (Title) _____

(Area Code) (Telephone Number) (Ext.) (Date)

INITIAL PROJECT WORKFORCE REPORT CONSTRUCTION

NEW JERSEY FACILITY

STATE OF NEW JERSEY
Division of Contract Compliance & Equal Employment Opportunity
EMPLOYEE INFORMATION REPORT

IMPORTANT- READ INSTRUCTIONS ON BACK OF FORM CAREFULLY BEFORE COMPLETING FORM. TYPE OR PRINT IN SHARP BALLPOINT PEN. FAILURE TO PROPERLY COMPLETE THE ENTIRE FORM MAY DELAY ISSUANCE OF YOUR CERTIFICATE. DO NOT SUBMIT EEO-1 REPORT FOR SECTION B, ITEM 11.

SECTION A - COMPANY IDENTIFICATION

1. FID. NO. OR SOCIAL SECURITY	2. TYPE OF BUSINESS <input type="checkbox"/> 1. MFG <input type="checkbox"/> 2. SERVICE <input type="checkbox"/> 3. WHOLESALE <input type="checkbox"/> 4. RETAIL <input type="checkbox"/> 5. OTHER	3. TOTAL NO. EMPLOYEES IN THE ENTIRE COMPANY
4. COMPANY NAME		
5. STREET	CITY	COUNTY STATE ZIP CODE
6. NAME OF PARENT OR AFFILIATED COMPANY (IF NONE, SO INDICATE)		CITY STATE ZIP CODE
7. CHECK ONE: IS THE COMPANY: <input type="checkbox"/> SINGLE-ESTABLISHMENT EMPLOYER <input type="checkbox"/> MULTI-ESTABLISHMENT EMPLOYER		
8. IF MULTI-ESTABLISHMENT EMPLOYER, STATE THE NUMBER OF ESTABLISHMENTS IN NJ		
9. TOTAL NUMBER OF EMPLOYEES AT ESTABLISHMENT WHICH HAS BEEN AWARDED THE CONTRACT		
10. PUBLIC AGENCY AWARDED CONTRACT	CITY	COUNTY STATE ZIP CODE
Official Use Only	DATE RECEIVED	INAUG. DATE ASSIGNED CERTIFICATION NUMBER

SECTION B - EMPLOYMENT DATA

11. Report all permanent, temporary and part-time employees ON YOUR OWN PAYROLL. Enter the appropriate figures on all lines and in all columns. Where there are no employees in a particular category, enter a zero. Include ALL employees, not just those in minority/non-minority categories, in columns 1, 2, & 3. **DO NOT SUBMIT AN EEO-1 REPORT.**

JOB CATEGORIES	ALL EMPLOYEES			PERMANENT MINORITY/NON-MINORITY EMPLOYEE BREAKDOWN									
	COL. 1 TOTAL (Cols. 2 & 3)	COL. 2 MALE	COL. 3 FEMALE	*****MALE*****					*****FEMALE*****				
				BLACK	HISPANIC	AMER. INDIAN	ASIAN	NON MIN.	BLACK	HISPANIC	AMER. INDIAN	ASIAN	NON MIN.
Officials/ Managers													
Professionals													
Technicians													
Sales Workers													
Office & Clerical													
Craftworkers (Skilled)													
Operatives (Semi-skilled)													
Laborers (Unskilled)													
Service Workers													
TOTAL													
Total employment From previous Report (if any)													
Temporary & Part- Time Employees	The data below shall NOT be included in the figures for the appropriate categories above.												

12. HOW WAS INFORMATION AS TO RACE OR ETHNIC GROUP IN SECTION B OBTAINED? <input type="checkbox"/> 1. Visual Survey <input type="checkbox"/> 2. Employment Record <input type="checkbox"/> 3. Other (Specify)	14. IS THIS THE FIRST Employee Information Report Submitted? 1. YES <input type="checkbox"/> 2. NO <input type="checkbox"/>	15. IF NO, DATE LAST REPORT SUBMITTED MO. DAY YEAR
13. DATES OF PAYROLL PERIOD USED From: To:		

SECTION C - SIGNATURE AND IDENTIFICATION

16. NAME OF PERSON COMPLETING FORM (Print or Type)	SIGNATURE	TITLE	DATE MO. DAY YEAR
17. ADDRESS NO. & STREET	CITY	COUNTY	STATE ZIP CODE PHONE (AREA CODE, NO., EXTENSION)

WHITE - DIV. OF CONTRACT COMPLIANCE; CANARY - DIV. OF CONTRACT COMPLIANCE DP;
PINK - PUBLIC AGENCY; GOLD - VENDOR

State Of New Jersey
*Division Of Contract Compliance And
 Equal Employment Opportunity In Public Contracts*

MONTHLY PROJECT WORKFORCE REPORT - CONSTRUCTION**READ INSTRUCTIONS ON BACK CAREFULLY BEFORE COMPLETING****THIS FORM. PLEASE TYPE OR PRINT IN BLACK OR BLUE INK.**

1. Name and address of Prime Contractor	2. Contractor ID Number	3. F ID or SS Number	
		4. Reporting Period	
		5. Public Agency Awarding Contract	Date of Award
		6. Name and Location of Project	7. Project ID Number

(CITY)

(STATE)

(ZIP CODE)

			CLASSI- FICATION (SEE REVERSE)	11. NUMBER OF EMPLOYEES						12. TOTAL	13. WORK HOURS			14. % OF WORK HRS		15. CUM. WORK HRS			16. CUM. % OF W/H	
8. CONTRACTOR NAME (LIST PRIME CONTRACTOR WITH SUBS FOLLOWING)	9. PERCENT OF WORK COMPLETED	10. TRADE OR CRAFT		A	B	C	D	E	F	NO. OF MIN. EMP.	TOTAL WORK HOURS	A	B	A	B	TOTAL WORK HOURS	A	B	A	B
				TOTAL	BLACK	HISPANIC	AMERICAN INDIAN	ASIAN	FEMALES			MIN. W/H	FEMALE W/H	% OF MIN. W/H	% OF FEMALE W/H		MIN. HOURS	FEMALE HOURS	% OF MIN. W/H	% OF FEM. W/H
			J																	
			AP																	
			J																	
			AP																	
			J																	
			AP																	
			J																	
			AP																	
			J																	
			AP																	

17. COMPLETED BY (PRINT OR TYPE)

(NAME)

(SIGNATURE)

(TITLE)

(AREA CODE)

(TELEPHONE NUMBER)

(EXT.)

(DATE)

DIVISION OF CONTRACT COMPLIANCE / EEO OFFICE

MONTHLY PROJECT WORKFORCE REPORT - CONSTRUCTION

PROPOSAL FORMS

BID DOCUMENT SUBMISSION CHECKLIST

All forms/certifications must be completed in full and initialed by the prospective bidder indicating inclusion of completed form with the bid documents. Failure to include any of the following will be a basis for disqualification of the bid.

Initial

Bid Document Submission Checklist	_____
Bid Proposal Form	_____
Schedule of Prices	_____
Consent of Surety	_____
Acknowledgement of Receipt of Addenda	_____
Affirmative Action Compliance Notice	_____
Acknowledgement of Mandatory Equal Employment Opportunity Language and Mandatory Americans With Disabilities Act of 1990	_____
Stockholder Disclosure Certification	_____
Business Registration Certificates	_____
Request for Prevailing Wage Determination	_____
Public Works Contractor Registration (including named Sub-Contractors) (Copy of Public Works Contractor Registration Certificates)	_____
Non-Collusion Affidavit	_____
Equipment Certification	_____
Bidder's Affidavit	_____
Bid Bond	_____
Bidder's Safety Acknowledgement	_____
Bidder's Qualification Form	_____
Plant and Equipment Questionnaire (4 pages)	_____
Iran Disclosure Form (P.L. 2012, Chapter 25)	_____
Naming of Subcontractors Form	_____

BID PROPOSAL FORM

TO: Town of Secaucus

FOR: Farm Road Park

The undersigned hereby declares that the only person or persons interested in the Proposal as principal or principals, is or are named below, and that no other person than herein below named has any interest in the Proposal. This Proposal is made without any connection with any other person or persons making a Proposal for the same purpose. The Proposal is in all respects fair and without collusion or fraud and that no officer or employee of the Owner is, shall be, or will become directly or indirectly, interested as a contracting party, partner, stockholder, surety or otherwise in the performance of the contract, or in the supplies, work, or business to which it relates.

It is further declared that the site of the work and the Contract Documents have been examined and it is also agreed that the work will be carried out and completed, if this Proposal is accepted, as specified and the undersigned will provide all the Superintendents, Labor, Material, Tools and Equipment, and all else necessary therefore, and incidental thereto for the items in the Proposal, complete in place, at the price per unit of measure for each scheduled item of work stated in the Schedule of Prices following.

It is understood that the quantities stated in this Schedule of Prices for the various items are estimates only and the Owner reserves the right to increase or decrease the items specified in the Contract Documents. It is further understood that the total price stated by the undersigned in the Schedule of Prices is based on the estimated quantities and it will control in the awarding of the Contract, and that payments will be made for the actual measurements of the authorized work as constructed in accordance with the unit price stated hereafter in the Schedule of Prices.

Accompanying this Proposal is a Consent of Surety and a certified check, cashier's check, or bid bond for a minimum of ten (10%) percent of the amount bid but not greater than \$20,000 payable to the Owner, which is agreed by the undersigned to be forfeited as liquidated damages, and not as a penalty, if the Contract is awarded to the undersigned, and the undersigned shall fail to execute the Contract for the work within the stipulated time. Otherwise, the bid security shall be returned to the undersigned as specified in the Contract Documents.

Company Name

Federal I.D.# or Social Security #

Address

Signature of Authorized Agent

Type of Print Name

Title

Telephone Number

Date

Fax Number

E-mail Address

**SCHEDULE OF PRICES
FARM ROAD PARK
TOWN OF SECAUCUS
HUDSON COUNTY, NEW JERSEY**

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION AND UNIT PRICES	UNIT PRICE	COMPUTED TOTALS
1.	L.S.	Mobilization		
		<u>Dollars</u>		
		<u>Cents</u>	Lump Sum	\$_____
2.	L.S.	Soil Erosion and Sediment Control		
		<u>Dollars</u>		
		<u>Cents</u>	Lump Sum	\$_____
3.	L.S.	Clearing Site		
		<u>Dollars</u>		
		<u>Cents</u>	Lump Sum	\$_____
4.	50 Tons	Disposing of Non-Regulated Debris		
		<u>Dollars</u>		
		<u>Cents</u>	\$_____	\$_____
5.	3,030 C.Y.	Certified Clean Fill		
		<u>Dollars</u>		
		<u>Cents</u>	\$_____	\$_____
6.	430 L.F.	6' Tall Fence		
		<u>Dollars</u>		
		<u>Cents</u>	\$_____	\$_____
7.	4 UNIT	Fence Gate		
		<u>Dollars</u>		
		<u>Cents</u>	\$_____	\$_____
8.	810 S.Y.	Dog Park Gravel Base		
		<u>Dollars</u>		
		<u>Cents</u>	\$_____	\$_____
9.	430 S.Y.	Walkways		
		<u>Dollars</u>		
		<u>Cents</u>	\$_____	\$_____
10.	900 S.Y.	Asphalt Area		
		<u>Dollars</u>		
		<u>Cents</u>	\$_____	\$_____

11.	460 L.F.	Concrete Curb	<u> </u> Dollars		
			<u> </u> Cents	\$ <u> </u>	\$ <u> </u>
12.	L.S.	Parking Striping and Markings	<u> </u> Dollars		
			<u> </u> Cents	Lump Sum	\$ <u> </u>
13.	4 UNIT	Inlets	<u> </u> Dollars		
			<u> </u> Cents	\$ <u> </u>	\$ <u> </u>
14.	1 UNIT	Manhole	<u> </u> Dollars		
			<u> </u> Cents	\$ <u> </u>	\$ <u> </u>
15.	1 UNIT	Concrete Headwall	<u> </u> Dollars		
			<u> </u> Cents	\$ <u> </u>	\$ <u> </u>
16.	250 L.F.	12" Reinforced Concrete Pipe	<u> </u> Dollars		
			<u> </u> Cents	\$ <u> </u>	\$ <u> </u>
17.	10 L.F.	15" Reinforced Concrete Pipe	<u> </u> Dollars		
			<u> </u> Cents	\$ <u> </u>	\$ <u> </u>
18.	10 S.Y.	Riprap Apron, 12" Thick ($D_{50} = 6"$)	<u> </u> Dollars		
			<u> </u> Cents	\$ <u> </u>	\$ <u> </u>
19.	1 UNIT	Outlet Control Structure	<u> </u> Dollars		
			<u> </u> Cents	\$ <u> </u>	\$ <u> </u>
20.	L.S.	Bioretention Basin	<u> </u> Dollars		
			<u> </u> Cents	Lump Sum	\$ <u> </u>
21.	L.S.	Park Lighting Installation	<u> </u> Dollars		
			<u> </u> Cents	Lump Sum	\$ <u> </u>
22.	8 UNIT	Benches	<u> </u> Dollars		
			<u> </u> Cents	\$ <u> </u>	\$ <u> </u>

23.	200 L.F.	10" Water Line	<u>Dollars</u>		
			<u>Cents</u>	\$ _____	\$ _____
24.	2 UNIT	ADA Signs	<u>Dollars</u>		
			<u>Cents</u>	\$ _____	\$ _____
25.	600 C.Y.	NJDEP Certified Screened Topsoil, 5" Thick	<u>Dollars</u>		
			<u>Cents</u>	\$ _____	\$ _____
26.	L.S	Plantings	<u>Dollars</u>		
			<u>Cents</u>	Lump Sum	\$ _____
27.	4,170 S.Y.	Fertilizing and Seeding	<u>Dollars</u>		
			<u>Cents</u>	\$ _____	\$ _____
28.	5,000 S.Y.	Demarcation Layer	<u>Dollars</u>		
			<u>Cents</u>	\$ _____	\$ _____

TOTAL BASE BID ITEMS 1 THROUGH 28 IN WORDS AND FIGURES

Dollars \$ _____

ITEM NO.	ESTIMATED QUANTITY	DESCRIPTION AND UNIT PRICES	UNIT PRICE	COMPUTED TOTALS
----------	--------------------	-----------------------------	------------	-----------------

ALTERNATIVE BID

29.	L.S.	30' Pavilion		
			Dollars	
			Cents	
			Lump Sum	\$ _____
30.	707 S.F.	Pavilion Foundation		
			Dollars	
			Cents	
			\$ _____	\$ _____

TOTAL ALTERNATIVE BID ITEMS IN WORDS AND FIGURES

_____ Dollars \$ _____

The owner reserves the right to award either the Base Bid only or the Base Bid plus the Alternate to one (1) contractor.

CONSENT OF SURETY

A performance bond will be required from the successful contractor on this project, and consequently, all bidders shall submit, with their bid, a consent of surety in substantially the following form:

To: Town of Secaucus
(Owner)

Re: _____
(Contractor)

Farm Road Park
(Project Description)

This is to certify that the _____
(Surety Company)

will provide to Town of Secaucus a performance bond in
(Owner)

the full amount of awarded contract, which shall meet any and all requirements under N.J.S.A. 2A:44-143 through N.J.S.A. 2A:44-147, in the event that said contractor is awarded a contract for the above project.

(CONTRACTOR)

(Authorized Agent of Surety Company)

Date: _____

**CONSENT OF SURETY MUST BE SIGNED AND SEALED BY AN AUTHORIZED AGENT
OR REPRESENTATIVE OF A SURETY COMPANY AND NOT BY THE INDIVIDUAL OR
COMPANY REPRESENTATIVE SUBMITTING THE BID.**

ACKNOWLEDGEMENT OF RECEIPT OF ADDENDA

TOWN OF SECAUCUS

FARM ROAD PARK

Pursuant to N.J.S.A. 40A:11-23.1a., the undersigned bidder hereby acknowledges receipt of the following notices, revisions, or addenda to the bid advertisement, specifications or bid documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notice, revision or addendum. Note that the local unit's record of notice to bidders shall take precedence and that failure to include provisions of changes in a bid proposal may be subject for rejection of the bid. If no addendum was received, please initial in the "NONE RECEIVED" space below.

Local Unit Reference Number or Title of Addendum/Revision	How Received (mail, fax, pick- up, etc.)	Date Received

Acknowledge by bidder:

NONE RECEIVED: _____

Name of Bidder: _____

By Authorized Representative: _____

Signature: _____

Print Name and Title: _____

Date: _____

AFFIRMATIVE ACTION COMPLIANCE NOTICE
N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27 et seq.
GOODS AND SERVICES CONTRACTS
(INCLUDING PROFESSIONAL SERVICES)

This form is a summary of the successful Bidder's requirement to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27-1 et seq.

The successful Bidder shall submit to the public agency, after notification of award but prior to execution of this contract, one of the following three documents as forms of evidence:

(a) A photocopy of a valid letter that the bidder is operating under an existing Federally approved or sanctioned affirmative action program (good for one year from the date of the letter);

OR

(b) A photocopy of a Certificate of Employee Information Report approval, issued in accordance with N.J.A.C. 17:27-4;

OR

(c) A photocopy of an Employee Information Report (Form AA302) provided by the Division and distributed to the public agency to be completed by the bidder in accordance with N.J.A.C. 17:27-4.

The successful bidder may obtain the Affirmative Action Employee Information Report (AA302) from the contracting unit during normal business hours.

The successful bidder(s) must submit the copies of the AA302 Report to the Division of Contract Compliance and Equal Employment Opportunity in Public Contracts (Division). The Public Agency copy is submitted to the public agency, and the bidder copy is retained by the bidder.

The undersigned bidder certifies that he/she is aware of the commitment to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27.1 et seq. and agrees to furnish the required forms of evidence.

The undersigned bidder further understands that his/her bid shall be rejected as non-responsive if said bidder fails to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27-1 et seq.

The undersigned agrees to comply with all laws relating to Affirmative Action, whether state, local or federal, for the entire period of the contract.

COMPANY: _____ SIGNATURE: _____
PRINT NAME: _____ TITLE: _____
DATE: _____

**ACKNOWLEDGEMENT OF MANDATORY EQUAL EMPLOYMENT OPPORTUNITY
LANGUAGE AND MANDATORY AMERICANS WITH DISABILITIES ACT OF 1990**

I Hereby Certify That _____
Name of Bidder

Has Submitted a Bid For _____
Project Name

On This _____ Day of _____, 20 _____, And

In Compliance with Public Law 1975, Chapter 127 (NJAC 17:27), As

Described in Exhibit A and B within these bid specifications.

Authorized Signature

Title

Subscribed and Sworn Before Me

On _____, 20 _____.

Notary Public

(Please note: The Bidder must fill in and execute this page and submit it as part of the sealed bid.)

Exhibit A

(Known as Exhibit B in Goods and Services Bid Specifications: A Guide for New Jersey Local Public Agencies – Section C)

MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE

N.J.S.A. 10:5-31 ET SEQ., N.J.A.C. 17:27

CONSTRUCTION CONTRACTS

During the performance of this contract, the Contractor agrees as follows:

The Contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the Contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to the following: employment, up-grading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The Contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The Contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the Contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The Contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer, pursuant to **N.J.S.A. 10:5-31 et seq.**, as amended and supplemented from time to time and the Americans with Disabilities Act.

When hiring or scheduling workers in each construction trade, the Contractor or subcontractor agrees to make good faith efforts to employ minority and women workers in each construction trade consistent with the targeted employment goal prescribed by **N.J.S.A. 17:27-7.2**; provided, however, that the Division may, in its discretion, exempt a Contractor or subcontractor from compliance with the good faith procedures prescribed by the following

provisions, A, B and C, as long as the Division is satisfied that the Contractor or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Division, that its percentage of active "card carrying" members who are minority and women workers is equal to or greater than the targeted employment goal established in accordance with **N.J.S.A. 17:27-7.2**. The Contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:

- (A) If the Contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the Contractor or subcontractor shall, within three business days of the contract award, seek assurances from the union that it will cooperate with the Contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules promulgated by the Treasurer pursuant to **N.J.S.A. 10:531** et. seq., as supplemented and amended from time to time and the Americans with Disabilities Act. If the Contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five business days prior to the commencement of construction work, the Contractor or subcontractor agrees to afford equal employment opportunities minority and women workers directly, consistent with this chapter. If the Contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and women workers consistent with affording equal employment opportunities as specified in this chapter, the Contractor or subcontractor agrees to be prepared to provide such opportunities to minority and women workers directly, consistent with this chapter, by complying with the hiring or scheduling procedures prescribed under (B) below; and the Contractor or subcontractor further agrees to take said action immediately if it determines that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.
- (B) If good faith efforts to meet targeted employment goals have not or cannot be met for each construction trade by adhering to the procedures of (A) above, or if the Contractor does not have a referral agreement or arrangement with a union for a construction trade, the Contractor or subcontractor agrees to take the following actions:
 - (1) To notify the public agency compliance officer, the Division, and minority and women referral organizations listed by the Division pursuant to **N.J.A.C. 17:27-5.3**, of its workforce needs, and request referral of minority and women workers;
 - (2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;
 - (3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the Contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade;

(4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the Contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area;

(5) If it is necessary to lay off some of the workers in a given trade on the construction site, layoffs shall be conducted in compliance with the equal employment opportunity and non-discrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;

(6) To adhere to the following procedure when minority and women workers apply or are referred to the Contractor or subcontractor:

(i) The contractor or subcontractor shall interview the referred minority or women worker.

(ii) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the Contractor or subcontractor shall in good faith determine the qualifications of such individuals. The Contractor or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this chapter. However, a Contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Division. If necessary, the Contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.

(iii) The name of any interested women or minority individual shall be maintained on a waiting list, and shall be considered for employment as described in (i) above, whenever vacancies occur. At the request of the Division, the Contractor or subcontractor shall provide evidence of its good faith efforts to employ women and minorities from the list to fill vacancies.

(iv) If, for any reason, said Contractor or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the Contractor or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the public agency compliance officer and to the Division.

(7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Division and submitted promptly to the Division upon request.

- (C) The Contractor or subcontractor agrees that nothing contained in (B) above shall preclude the Contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the targeted county employment goal, the Contractor or subcontractor shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the Contractor or subcontractor shall not be required to employ women and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the Contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union.

After notification of award, but prior to signing a construction contract, the Contractor shall submit to the public agency compliance officer and the Division an initial project workforce report (Form AA 201) electronically provided to the public agency by the Division, through its website, for distribution to and completion by the Contractor, in accordance with **N.J.A.C. 17:27-7**. The Contractor also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Division and to the public agency compliance officer.

The Contractor agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and/or off-the-job programs for outreach and training of minorities and women.

- (D) The Contractor and its subcontractors shall furnish such reports or other documents to the Division of Public Contracts Equal Employment Opportunity Compliance as may be requested by the Division from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Public Contracts Equal Employment Opportunity Compliance for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code (NJAC 17:27)**.

Exhibit B

(Known as Appendix A in Goods and Services Bid Specifications: A Guide for New Jersey Local Public Agencies – Section C)

AMERICANS WITH DISABILITIES ACT OF 1990 Equal Opportunity for Individuals with Disability

The contractor and the Town of Secaucus, (hereafter "owner") do hereby agree that the provisions of Title 11 of the Americans With Disabilities Act of 1990 (the "Act") (42 U.S.C. S121 01 et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs, and activities provided or made available by public entities, and the rules and regulations promulgated pursuant there unto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the owner pursuant to this contract, the contractor agrees that the performance shall be in strict compliance with the Act. In the event that the contractor, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the contractor shall defend the owner in any action or administrative proceeding commenced pursuant to this Act. The contractor shall indemnify, protect, and save harmless the owner, its agents, servants, and employees from and against any and all suits, claims, losses, demands, or damages, of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The contractor shall, at its own expense, appear, defend, and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the owner's grievance procedure, the contractor agrees to abide by any decision of the owner which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the owner, or if the owner incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the contractor shall satisfy and discharge the same at its own expense.

The owner shall, as soon as practicable after a claim has been made against it, give written notice thereof to the contractor along with full and complete particulars of the claim. If any action or administrative proceeding is brought against the owner or any of its agents, servants, and employees, the *owner shall* expeditiously forward or have forwarded to the contractor every demand, complaint, notice, summons, pleading, or other process received by the owner or its representatives.

It is expressly agreed and understood that any approval by the owner of the services provided by the contractor pursuant to this contract will not relieve the contractor of the obligation to comply with the Act and to defend, indemnify, protect, and save harmless the owner pursuant to this paragraph.

It is further agreed and understood that the owner assumes no obligation to indemnify or save harmless the contractor, its agents, servants, employees and subcontractors for any claim which may arise out of their performance of this Agreement. Furthermore, the contractor expressly understands and agrees that the provisions of this indemnification clause shall in no way limit the contractor's obligations assumed in this Agreement, nor shall they be construed to relieve the contractor from any liability, nor preclude the owner from taking any other actions available to it under any other provisions of the Agreement or otherwise at law.

STOCKHOLDER DISCLOSURE CERTIFICATION

NEW JERSEY PUBLIC LAW 1977, CHAPTER 33 REQUIRES EACH CORPORATION OR PARTNERSHIP SUBMITTING A BID TO ANY GOVERNMENTAL AGENCY TO ACCOMPANY THAT BID WITH A STATEMENT OF OWNERSHIP LISTING THE NAME AND ADDRESS AND PERCENTAGE OWNERSHIP OF EACH INDIVIDUAL OWNING TEN PERCENT (10%) OR MORE OF THE CORPORATION OR PARTNERSHIP. THIS FORM OR AN APPROPRIATE LISTING ON THE BIDDERS LETTERHEAD CONTAINING SIMILAR INFORMATION, MUST BE INCLUDED IN THE BIDDERS PROPOSAL WHEN THE BID IS ORIGINALLY SUBMITTED.

OWNERSHIP STATEMENT – PER PL 1977 CHAPTER 33

(NAME OF CORPORATION OR PARTNERSHIP) PRINT

(ADDRESS OF RECORD) PRINT

<u>NAME</u>	<u>ADDRESS</u>	<u>PERCENT OWNED</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

IF ONE OR MORE SUCH STOCKHOLDER OR PARTNER IS ITSELF A CORPORATION OR IS A PARTNERSHIP, THE STOCKHOLDERS HOLDING TEN PERCENT (10%) OR MORE OF THAT CORPORATION'S STOCK OR THE INDIVIDUAL PARTNERS OWNING TEN PERCENT (10%) OR GREATER INTEREST IN THAT PARTNERSHIP MUST BE LISTED ON A SUPPLEMENTAL SHEET ON THE BIDDER'S LETTERHEAD.

THE FULL NAMES AND RESIDENCES OF ALL PERSONS INTERESTED IN THIS BID AS PRINCIPALS ARE AS FOLLOWS:

_____	_____
_____	_____
_____	_____

CONTRACTOR'S LEGAL STATUS: _____

(CORPORATION LIMITED LIABILITY CORPORATION, SUBCHAPTERS COOPERATIVE, PARTNERSHIP, LIMITED LIABILITY PARTNERSHIP, JOINT VENTURE, OR INDIVIDUAL OPERATING UNDER A TRADENAME.)

I CERTIFY THAT THE FOREGOING INFORMATION IS CORRECT.

SUBSCRIBED AND SWORN TO
BEFORE ME THIS _____ DAY
OF _____, 20____.

SIGNATURE

TITLE

NOTARY PUBLIC OF
MY COMMISSION EXPIRES _____, 20____

BUSINESS REGISTRATION CERTIFICATE

A contractor shall provide proof of its own business registration and proofs of business registration for any named subcontractors. The proof shall be in the form of a copy of the organization's "Business Registration Certificate" issued by the Division of Revenue. The proof of business registration shall be provided prior to the time the bid or proposal is awarded or authorized by the contracting agency.

The contractor shall provide written notice to its subcontractors and suppliers of the responsibility to submit proof of business registration to the contractor. The requirement of proof of business registration extends down through all levels (tiers) of the project.

Before final payment on the contract is made by the contracting agency, the contractor shall submit an accurate list and the proof of business registration of each subcontractor or supplier used in the fulfillment of the contract, or shall attest that no subcontractors were used.

For the term of the contract, the contractor and each of its affiliates and a subcontractor and each of its affiliates [N.J.S.A. 52:32-44(g)(3)] shall collect and remit to the Director, New Jersey Division of Taxation, the use tax due pursuant to the Sales and Use Tax Act on all sales of tangible personal property delivered into this State, regardless of whether the tangible personal property is intended for a contract with a contracting agency.

A business organization that fails to provide a copy of a business registration as required pursuant to Section 1 of P.L. 2001, c.134 (C.52:32-44 et al.) or Subsection e. or f. of Section 92 of P.L. 1977, c.110 (C.5:12-92), or that provides false business registration information under the requirements of either of those sections, shall be liable for a penalty of \$25.00 for each day of violation, not to exceed \$50,000 for each business registration copy not properly provided under a contract with a contracting agency.

REQUEST FOR PREVAILING WAGE DETERMINATION

I, the undersigned, being the duly authorized and acting legal representative of the Bidder, do hereby certify as follows:

There shall be paid each laborer or mechanic of the successful Bidder or subcontractor engaged in work on the project under this bid in the trade or occupation required in these specifications, not less than the hourly wage rate established by the State Commissioner of Labor & Industry under N.J.S. 34:15-25 regulation pertaining to prevailing wage rates.

The Owner will not consider any claims for additional compensation made by the Bidder because of payment by the Bidder of any wage rate in excess of the applicable rate contained in this contract. All disputes in regard to the payment of wages in excess of minimum wages shall be adjusted by the Bidder.

WITNESS OR ATTESTED BY

SIGNATURE

DATE

NAME OF ORGANIZATION

PRINT NAME AND TITLE OF
PERSON SIGNING

(Must be signed and submitted with Bid Proposal)

PUBLIC WORKS CONTRACTOR REGISTRATION

The Public Works Contractor Registration Act (PWCRA) requires that all contractors, including named subcontractors, to register with the Department of Labor prior to submitting price proposals or engaging on certain public works contracts that exceed the prevailing wage threshold. The prevailing wage threshold is \$15,444 for municipalities and \$2,000 for all non-municipal entities, such as boards of education, authorities, fire districts, counties, etc. The municipality reserves the right to maintain the application of prevailing wage rates for projects under the threshold.

Under the law a *contractor* is a “person, partnership, association, joint stock company, trust, corporation, or other legal business entity or successor thereof who enters into a contract” which is subject to the provisions of the New Jersey Prevailing Wage Act [N.J.S.A. 34:11-56.25 et seq.]. It applies to contractors based in New Jersey or in another state.

The PWCRA defines “public works projects” as contracts for “public works” as defined in the Prevailing Wage Act [N.J.S.A. 34:11-56.26(5)]. The term means:

- “Construction, reconstruction, demolition, alteration, or repair work, or maintenance work, including painting and decorating, done under contract and paid for in whole or in part out of the funds of a public body, except work performed under a rehabilitation program.
- “Public work” shall also mean construction, reconstruction, demolition, alteration, or repair work, done on any property or premises, whether or not the work is paid for from public funds,...
- “Maintenance work” means the repair of existing facilities when the size, type or extent of such facilities is not hereby changed or increased. While “maintenance” includes painting and decorating and is covered under the law, it does not include work such as routine landscape maintenance or janitorial services.

NON - COLLUSION AFFIDAVIT

State of New Jersey:

County of _____

ss:

I, _____ residing in
(name of affiant)

_____ in the County of _____ and the State of _____ of
(name of municipality)

full age, being duly sworn according to the law on my oath depose and say that:

I am _____ of the firm of _____
(title or position) (name of firm)

the bidder making this Proposal for the bid entitled FARM ROAD PARK,
(title of bid proposal)

and that I executed the said proposal with full authority to do so that said bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said proposal and in this affidavit are true and correct, and made with full knowledge that the Town of Secaucus relies upon
(name of contracting unit)

the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee except bona fide employees or bond fide established commercial or selling agencies maintained by _____.

Subscribed and sworn to

Signature of Affiant

before me this day

_____, 20____

(Type or print name of affiant under signature)

Notary Public of

My commission expires _____

(Seal)

EQUIPMENT CERTIFICATION

The undersigned Bidder hereby certifies as follows:

The bidder owns or controls all the necessary equipment required to accomplish the work described in the specifications.

Name of Bidder: _____

By: _____
(Signature)

Name of above: _____
(Print)

Title: _____

Date: _____

BIDDER'S AFFIDAVIT

STATE OF _____

COUNTY OF _____

_____ being duly sworn, deposes and says that he
resides at _____

and that he is the _____
(Give Title)
of _____
(Name of Organization)

who signed the above Proposal of Bid, that he was duly authorized to sign, that the Bid is the true offer of the Bidder, that the seal attached is the seal of the Bidder and that all declarations and statements contained in the Bid are true to the best of his knowledge and belief.

He further deposes that he has submitted herewith a list of names and addresses of all stockholders and/or partners owning a 10 percent or greater interest in compliance with P.L. 1977, Chapter 33, effective March 8, 1977.

Affiant

Subscribed and Sworn before me
this _____ day of _____, 20__.

(Notary Public) (Seal)

(Commission expiration date)

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,

_____ as Principal, and _____ as Surety, are hereby held and firmly bound unto the Town of Secaucus in the penal sum of not less than ten percent of the bid amount to a maximum of \$20,000.00 for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

Signed this _____ day of _____, 20_____

The condition of the above obligation is such that whereas the Principal has submitted to the Town of _____ a certain Bid, attached hereto, and made a part of hereof, to enter into a contract in writing for _____

NOW THEREFORE,

- A) If said Bid shall be rejected, or, in the alternate,
- B) if said Bid shall be accepted and the Principal shall execute and deliver a contract in the form of contract to be prepared by the Town Attorney (properly completed in accordance with said Bid) and shall furnish a bond for his faithful performance of said Contract, and shall in all other respects perform the agreement created by the acceptance of the said Bid,

Then, this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood that all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Principal may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and Surety have set their hands and seals, and such of them as are corporations having their corporate seals to be hereto affixed and these presents to be signed by their proper corporate officers, the day and year first set forth above.

Principal: _____ (L.S.)

Surety: _____

By: _____

BIDDER'S SAFETY ACKNOWLEDGMENT

The undersigned hereby states that as a principal of the firm submitting this proposal, he or she is fully aware that all safety regulations of the Occupational Safety and Health Administration (OSHA) and the requirements of the State of New Jersey Department of Labor and Industry shall be adhered to on this project and that he or she shall instruct his or her personnel to follow these regulations. These regulations include, but not limited to, the regulations concerning Trench Excavation, Competent Persons and Confined Space Regulations.

If it is observed by an official representative of the municipality that these safety regulations are not being followed and there exists a potential serious safety deficiency that could result in accident, I acknowledge that this municipal representative may stop the project until the safety deficiency is corrected without any claim for additional compensation by this firm.

WITNESS OR ATTESTED BY

SIGNATURE

DATE

NAME OF ORGANIZATION

PRINT NAME AND TITLE OF
PERSON SIGNING

(Must be signed and submitted with Bid Proposal)

BIDDER'S QUALIFICATION FORM

(This form is part of the Proposal)

On the form provided, indicate at least five (5) jobs performed within the last three (3) years of a similar nature and contract amount:

1. Name of Job: _____
Major Construction Items: _____

Engineer Name, Address, & Telephone Number: _____

2. Name of Job: _____
Major Construction Items: _____

Engineer Name, Address, & Telephone Number: _____

3. Name of Job: _____
Major Construction Items: _____

Engineer Name, Address, & Telephone Number: _____

4. Name of Job: _____
Major Construction Items: _____

Engineer Name, Address, & Telephone Number: _____

5. Name of Job: _____
Major Construction Items: _____

Engineer Name, Address, & Telephone Number: _____

PLANT AND EQUIPMENT QUESTIONNAIRE

Submitted to _____
By _____
Principal Office _____

A Corporation
A Co-partnership
An Individual

The signatory of this questionnaire guarantees the truth and accuracy of all statements and of all answers to interrogatories hereinafter made.

1. In what manner have you inspected the proposed work? Explain in detail.

2. Explain your plan or layout for performing the proposed work.

3. The work, if awarded to you, will have the personal supervision of whom?

4. Do you intend to do the proposed work with your own forces? _____

STATUS OF CONTRACTS ON HAND

5. Give full information about all of your contracts, whether private or government contracts, whether prime or sub-contracts; whether in progress or awarded but not yet begun; or where you are low bidder pending formal award of contract.

Owner	Location	Description	Adjusted Contract Amount	Amount Completed and Billed	Additional Earned Since Last Estimate	Balance To Be Completed	Estimated Date of Completion
Totals							

6. What equipment do you own that is available for and intended to be used on the proposed project?

TABLE 1

Quantity	Item	Description, Size Capacity, Etc.	Condition	Years of Service	Present Location

7. What equipment do you intend to purchase or lease for use on the proposed work, should the contract be awarded to you?

TABLE 2

Quantity	Item	Description, Size Capacity, Etc.	Approximate Purchase	Cost Lease

8. Have you made contracts or received firm offers for all materials within prices used in preparing your proposal? Do not give name of dealers or manufacturers.

_____Yes

_____No

The Undersigned hereby declare(s) that the items of equipment in Table 1 are owned by _____, and are available for and intended to be used on the Project, if _____ is awarded the Contract, and that (he) (she) (they) propose(s) to purchase or lease for the Project the additional items of equipment stated in Table 2.

If awarded the Contract, the Undersigned will furnish certificates from the owners of leased equipment to the effect that, in case of default of contract, as set forth in Article 25 the Governing Body has the right to take over the leased equipment for use in completing the work.

Dated at _____ this _____
day of _____, 20 _____.

Name of Organization

By _____

Title or Person Signing

STATE OF _____

COUNTY OF _____

_____, Being duly sworn, deposes and says that he
is _____ of the above _____

Name of Organization

and that the answers to the foregoing questions and all statements therein contained are true and correct.

Sworn to before me this _____
day of _____, 20 _____

My Commission Expires _____

Notary Public

**STATE OF NEW JERSEY – DIVISION OF PURCHASE AND PROPERTY
TOWN OF SECAUCUS
DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN**

Bid Name: _____

Bid Due Date: _____

Bidder: _____

**PART 1: CERTIFICATION
BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.**

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that NEITHER the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the Department of the Treasury Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found on the Division's website at <http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf>. Bidders **must** review this list prior to completing the below certification. If the New Jersey Director of the Division of Purchase and Property finds a person or entity to be in violation of law, he/she shall take action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party.

PLEASE CHECK THE APPROPRIATE BOX:

- ☐ **I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed** on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. **I will skip Part 2 and sign and complete the Certification below:** **OR**
- ☐ **I am unable to certify as above because the bidder and/or one of more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as non-responsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.**

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION. IF YOU NEED ADDITIONAL ROOM, ADD ADDITIONAL PAGES.

Name _____ Relationship to Bidder/Offeror _____

Description of Activities _____

Duration of Engagement _____ Anticipated Cessation Date _____

Bidder/Offeror Contact Name _____

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey and the Town of Secaucus are relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State of New Jersey and the Town of Secaucus to notify the State of New Jersey and the Town of Secaucus in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and/or the Town of Secaucus and that the State and/or the Town of Secaucus at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): _____ **Signature:** _____

Title: _____ **Date:** _____



State of New Jersey

DEPARTMENT OF THE TREASURY
DIVISION OF PURCHASE AND PROPERTY
OFFICE OF THE DIRECTOR
33 WEST STATE STREET

P. O. BOX 039
TRENTON, NEW JERSEY 08625-0039

<https://www.njstart.gov>

Telephone (609) 292-4886 / Facsimile (609) 984-2575

PHILIP D. MURPHY
Governor

ELIZABETH MAHER MUOIO
State Treasurer

SHEILA Y. OLIVER
Lt. Governor

MAURICE A. GRIFFIN
Acting Direct

The following list represents entities determined, based on credible information available to the public, to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25"):

1. AK Makina Ltd.
2. Amona
3. Bank Markazi Iran (Central Bank of Iran)
4. Bank Mellat
5. Bank Melli Iran
6. Bank Saderat PLC
7. Bank Sepah
8. Bank Tejarat
9. China International United Petroleum & Chemicals Co., Ltd. (Unipetec)
10. China National Offshore Oil Corporation (CNOOC)
11. China National Petroleum Corporation (CNPC)
12. China National United Oil Corporation (ChinaOil)
13. China Oilfield Services Limited
14. China Petroleum & Chemical Corporation (Sinopec)
15. China Precision Machinery Import-Export Corp. (CPMIEC)
16. Indian Oil Corporation
17. Kingdream PLC
18. Naftiran Intertrade Company (NICO)
19. National Iranian Tanker Company (NITC)
20. Oil and Natural Gas Corporation (ONGC)
21. Oil India Limited
22. Persia International Bank
23. Petroleos de Venezuela (PDVSA Petróleo, SA)
24. PetroChina Company, Ltd.
25. Sameh Afzar Tajak Co. (SATCO)
26. Shandong Fin Cnc Machine Company, Ltd.
27. Sinohydro Co., Ltd.
28. SK Energy Co. Ltd.
29. SKS Ventures
30. Som Petrol AS
31. Zhuhai Zhenrong Company

List Date: January 10, 2022

NAMING OF SUBCONTRACTORS FORM

ALL CONTRACTORS MUST COMPLETE THE FOLLOWING:

N.J.S.A. 40A:11-16 requires that where all the work and materials required to complete the construction project are to be included in a single overall contract, bidders that propose using subcontractors for any of the four specialized "sub-prime" categories (i.e. Plumbing and gas fitting and all kindred work; Steam and hot water heating, ventilating apparatus, steam power plants and kindred work (HVAC); Electrical work; and Structural steel and ornamental iron work) must submit a certificate with their bids listing each subcontractor named in the bid for that category.

If _____ is successfully awarded this
(Name of Firm)
project, I, _____,
(Authorized Representative)
of the City of _____, in the County of _____ and State
of _____, certify pursuant to N.J.S.A. 40A:11-16 that I shall utilize the
following subcontractors if this Bid is successfully awarded to my firm.

<u>NAME OF SUBCONTRACTOR</u>	<u>SCOPE OF WORK</u>

(Use additional sheet of paper if more space required)

Signature of Bidder

Name and Title (Print or Type)

SWORN TO AND SUBSCRIBED
BEFORE ME THIS ____ DAY
OF _____ 20__.

SUPPLEMENTARY TECHNICAL SPECIFICATIONS

Edition 2019

**SUPPLEMENTARY SPECIFICATIONS
FOR STATE AID PROJECTS**

FOR

FARM ROAD PARK

IN THE TOWN OF SECAUCUS

COUNTY OF HUDSON

AUTHORIZATION OF CONTRACT

The contract for this project is authorized by the provisions of local public contracts law, NJSA 40A: 11-1 et seq.

SPECIFICATIONS TO BE USED

The 2019 Standard Specifications for Road and Bridge Construction, of the New Jersey Department of Transportation and as amended herein, shall govern the construction of this project.

WAGE RATES

The contractor shall pay the minimum wage rates determined by the New Jersey Department of Labor.

State wage rates may be obtained from the New Jersey Department of Labor (Telephone: 609-292-2259) or by accessing the Department of Labor's web site at http://lwd.dol.state.nj.us/labor/wagehour/wagehour_index.html. The State wage rates in effect at the time of award will be made a part of this Contract, pursuant to Chapter 150, Laws of 1963 (NJSA 34:11-56.25, *et seq.*).

In the event it is found that any employee of the contractor or any subcontractor covered by the contract, has been paid a rate of wages less than the minimum wage required to be paid by the contract, the contracting agency may terminate the contractor's or subcontractor's right to proceed with the work, or such part of the work, as to which there has been a failure to pay required wages and to prosecute the work to completion or otherwise. The contractor and his sureties shall be liable to the contracting agency for any excess costs occasioned thereby.

GENERAL

All awards shall be made subject to the approval of the New Jersey Department of Transportation. No construction shall start before approval of said award by the New Jersey Department of Transportation. Prior to the start of construction the contractor must submit a Material Questionnaire (SA-11) listing all sources of materials. Any materials used on the project from a non-approved New Jersey Department of Transportation source will be considered non-participating. The contractor is also notified that the District Office, Division of Local Aid and Economic Development must be notified of the construction commencement date at least three (3) calendar days prior to the start of construction.

Award of contract and subletting will not be permitted to, materials will not be permitted from, and use of equipment will not be permitted that is owned and/or operated by, firms and individuals included in the report of suspensions, debarments and disqualifications of firms and individuals as maintained by the Department of the Treasury, General Services Administration, CN-039, Trenton NJ 08625 (609-292-5400).

Payment for a pay item in the proposal includes all the compensation that will be made for the work of that item as described in the contract documents unless the "Measurement and Payment" section provides that certain work essential to that item will be paid for under another pay item.

Whenever any section, subsection, subpart or subheading is amended by such terms as changed to, deleted or added it is construed to mean that it amends that section, subsection, subpart or subheading of the 2019 Standard Specifications unless otherwise noted.

Whenever reference to page number is made, it is construed to refer to the 2019 Standard Specifications unless otherwise noted.

Henceforth in this supplementary specification whenever reference to the State, Department, ME, RE or Inspector is made, it is construed to mean the particular municipality or county executing this contract.

Whenever reference to Title 27 is made, it is construed to mean Title 40.

DIVISION 100 – GENERAL PROVISIONS

SECTION 101 – GENERAL INFORMATION

101.04 INQUIRIES REGARDING THE PROJECT

1. Before Award of Contract.

Mr. Frank J. Rossi, LSRP
330 Phillips Avenue
South Hackensack, NJ 07606
Telephone: 201-641-0770

2. After Award of Contract.

Mr. Frank J. Rossi, LSRP
330 Phillips Avenue
South Hackensack, NJ 07606
Telephone: 201-641-0770

SECTION 105 - CONTROL OF WORK

105.07 COOPERATION WITH UTILITIES

THE FOLLOWING IS ADDED BEFORE THE FIRST PARAGRAPH:

The corporations, companies, agencies, or municipalities owning or controlling the utilities, and the name, title, address, and telephone number of their local representative are as listed in Appendix B.

Bidders are advised to verify the above information; its accuracy and completeness are not guaranteed.

DIVISION 150 – CONTRACT REQUIREMENTS

SECTION 154 – MOBILIZATION

154.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
MOBILIZATION	LUMP SUM

SECTION 158 – SOIL EROSION AND SEDIMENT CONTROL AND WATER QUALITY CONTROL

158.04 MEASUREMENT AND PAYMENT

DELETE THIS ENTIRE SUB-SECTION AND REPLACE WITH THE FOLLOWING:

Payment will be made for Item as follows:

<i>Item</i>	<i>Pay Unit</i>
SOIL EROSION AND SEDIMENT CONTROL	LUMP SUM

All soil erosion and sediment control measures as illustrated on the contract drawings; including but not limited to silt fence, stockpile areas, construction access areas, shall be included under the lump sum bid price.

SECTION 161 – FINAL CLEANUP

161.03.01 Final Cleanup

DELETE THIS ENTIRE SUB-SECTION AND REPLACE WITH THE FOLLOWING:

The Contractor shall provide under this item all work and materials necessary for the removal of all dirt, rubbish, construction materials, tool shanties, signs, and any other construction related debris remaining that did not exist prior to construction and is not incorporated as part of the final work. More specifically, clean-up work shall include, but is not limited to, the following:

- a) Removal and proper disposal of all rubbish, debris, scrap.
- b) Salvage or disposal by the Contractor of unused and uncompensated surplus materials unless otherwise instructed by Engineer.
- c) Removal of all construction equipment, shanties, tool sheds, and other temporary structures, buildings and work.

- d) Clean-up of all areas used to stockpile materials, trailers, string pipe, or which were otherwise affected by the prosecution of the work.
- e) Grassing or providing planting or other surface treatment for areas affected by the final clean-up and outside the limits of payment for the surface restoration items.
- f) Removal of all temporary soil erosion and sediment control measures.
- g) Clean-up of storm drains, catch basins, waterways, ditches, etc.
- h) Sweeping of all streets affected by the work.
- i) Repair or replace in an acceptable manner fences, mailboxes, and all other private or public property which have been damaged or destroyed on account of the prosecution of the work.
- j) Fill all depressions and water pockets on public and private property caused by his operations.
- k) Leave the site of the Project and adjacent public and private property in a neat and presentable condition wherever his operations have disturbed conditions which existed at the time of starting the work.
- l) The Contractor shall procure and submit to the Engineer signed statements from property owners affected that he has fulfilled his obligations in the matters enumerated above with regard to their respective properties.

DIVISION 200 – EARTHWORK

SECTION 201 – SITE CLEARING

201.03.01 CLEARING SITE

B. Clearing and Grubbing

THE FOLLOWING PARAGRAPH IS ADDED:

The contractor will clear vegetative debris on site as denoted on the plans.

All stumps, plant material, debris, etc. must be removed as specified on the contract drawings.

Existing vegetation within the 25' riparian buffer will not be disturbed and shall remain undisturbed.

The contractor is responsible for the removal and disposal of all dead and fallen trees as specified on the construction drawings or as directed by the RE.

201.03.09 DISPOSAL OF REMOVED MATERIALS AND DEBRIS

THE ENTIRE SUB-SECTION IS CHANGED TO:

The contractor shall dispose of all deleterious material. This waste shall be disposed of as classified by NJDEP (NJAC 7:26-2.13) at a facility licensed by that facility's state environmental regulatory body to dispose of this type of waste.

201.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
CLEARING SITE	LUMP SUM
DISPOSING OF NON-REGULATED DEBRIS	TON

SECTION 202 – EXCAVATION

202.03 CONSTRUCTION

202.03.05 Excavation, Regulated Material

THE FOLLOWING IS ADDED TO THIS SECTION:

Excavation to complete the project shall be made as detailed on the Contract Drawings. All excavation and restoration will be coordinated with the Town of Secaucus's Licensed Site Remediation Professional (LSRP) or Resident Engineer. The Town of Secaucus is the property owner of the parcels in the project area and as the generator is solely responsible for the designation of all excavated material.

The excavation Block 203, Lot 41 & 42 is in an area of mapped historic fill according to the New Jersey Department of Environmental Protection (NJDEP) GeoWeb Database. Historic fill typically contains polycyclic aromatic hydrocarbons (PAH) and heavy metals above the NJDEPs most stringent Soil Remediation Standards (SRS). The soil to be excavated at these parcels is anticipated to be classified as non-hazardous regulated material (urban fill or ID-27 Dry Industrial Waste) and will be used on site.

In addition, soil samples collected at the project area by the Project LSRP revealed the presence of Arsenic, Benzo(a)pyrene, Lead, and PCBs. A copy of the analytical result summary tables and sample location plan are provided herein. Contractors shall have the requisite OSHA HAZWOPER (29 CFR 1910.120) training for all work involving excavation, capping and handling of contaminated soil.

The properties at Block 203, Lot 41 & 42 (NJDEP ID No. 695135) have an existing Deed of Environmental Restriction due to historic fill. Any soil excavated from Block 203, Lot 41 & 42 must remain on site and cannot be taken off site. If the soil is to be reused on site it must be placed beneath the demarcation barrier and engineering control (i.e. cap). Work at this parcel must be coordinated with the Town of Secaucus's LSRP for this site, Paul J. Kenny.

SECTION 204 – GRADING

THE ENTIRE SECTION IS ADDED:

204.01 DESCRIPTION

This Section describes the requirements for grading activities and placement of the demarcation layer as shown on the contract drawings.

204.02 MATERIALS

Contractor is to determine and provide all equipment deemed necessary to perform job.

204.03 CONSTRUCTION

204.03.01 Excavation

The contractor is to ensure the site meets the minimum cap requirements specified in the Remedial Action Workplan prepared by Ellas Environmental, and the LSRP of record, Paul J. Kenny namely:

1. *Play Areas/Dog Enclosure*: A minimum of 12" of certified clean fill over demarcation layer.
2. *Concrete/Asphalt Areas*: A minimum of four (4) inches of concrete or asphalt over a minimum of four (4) inches of sub base over a demarcation layer.
3. *Vegetative Cover*: A minimum 10" of certified clean fill over demarcation layer.
4. *Landscaped Areas*: A minimum of 12" of certified clean fill over demarcation layer.
5. *Shrubs and Trees*: Trees and/or shrubs can be planted within barrier and/or buffer layer(s), but must maintain a minimum of one (1) foot clean fill on all sides and below the extent of planted root ball of larger plant materials.
6. *Underground Utility Corridors*: Piping & Conduits Placed in Trenches: Barrier - Clean fill from surface down to utility (minimum of one (1) foot) over a Buffer – a minimum of one (1) foot of clean fill below and around the sides of the utility over a Demarcation – Visible contamination boundary marker along the bottom and sides of the trench.

In areas where the proposed grading does not provide the minimum cover requirements, it is the contractor's responsibility to excavate the existing soil as needed to meet the minimum threshold.

204.03.02 Demarcation layer

A visual demarcation layer consisting of either geotextile fabric (Mirafi 140N, or approved equal) or hi-vis orange netting (IWT Cargo-Guard or approved equal) shall be placed atop the existing native soil prior to the placement of clean backfill and/or cap materials.

204.03 Backfill requirements

Grading activities shall be performed utilizing clean soil which meets all New Jersey Department of Environmental Protection (NJDEP) requirements for being classified as "clean fill" as detailed in the Technical Requirements for Site Remediation, N.J.A.C. 7:26E and NJDEP Alternative and Clean Fill Guidance for SRP Sites, latest edition. This shall include, but not be limited to, uncontaminated pursuant to any applicable remedial standard and free of any extraneous waste or debris. The Contractor shall provide certification stating that the material is virgin, from a commercial or non-commercial source. Additionally, during importation the Contractor shall provide the necessary bills of lading that the Engineer will include in the project's environmental reporting.

Prior to importing fill to the site, the Contractor shall provide the Engineer with all requisite documentation indicating the source of the material and certification that the material is free of contamination and meets the NJDEP's standards as "clean fill." The Engineer reserves the right to visit any and all borrow sites for purposes of inspection and verification of available supply. The Engineer also may sample the material prior to its acceptance. All testing and reports shall be developed at the cost of the Contractor. Additionally, time awaiting laboratory

analysis in order to certify that the material is “clean fill” shall not be considered an extension to the project’s completion date.

The Engineer reserves the right to reject any and all material not considered to be clean fill. Unacceptable materials include, but are not limited to, recycled concrete aggregate (RCA), demolition debris, historic fill, dredge spoils, vegetative waste and soil containing contaminants present above the NJDEP’s most stringent Soil Remediation Standard.

204.04 MEASUREMENT AND PAYMENT

Item

CERTIFIED CLEAN FILL
DEMARCATIION LAYER

Pay Unit

CUBIC YARD
SQUARE YARD

DIVISION 400 – PAVEMENTS

SECTION 401 – HOT MIX ASPHALT (HMA) COURSES

401.03.03 H AIR VOIDS ACCEPTANCE PLAN

THIS SUBSECTION IS REPLACED BY THE FOLLOWING:

H. Air Void Requirements.

Pavement lots are defined as approximately 15,000 square yards of pavement in Surface area. If pavement lot area is less than 5000 square yards, the engineer may waive the air voids requirements.

The RE will designate an independent testing agency (Laboratory) to perform the quality assurance sampling, testing and analysis. The Laboratory is required to be accredited by the AASHTO Accreditation Program (www.amrl.net). The Laboratory's accreditation must include AASHTO T 166 and AASHTO T 209.

The Laboratory Technician who performs the quality assurance sampling shall be certified by the Society of Asphalt Technologists of New Jersey as an Asphalt Plant Technologist, Level 1.

The Laboratory will determine air voids from 5 (Five) 6-inch diameter cores taken from each lot in random locations within the traveled way and at least one core in each travel lane. The Laboratory will determine air voids of cores from the values for the maximum specific gravity of the mix and the bulk specific gravity of the core. The Laboratory will determine the maximum specific gravity of the mix according to NJDOT B-3 and AASHTO T 209, except that minimum sample size may be waived in order to use a 6-inch diameter core sample. The Laboratory will determine the bulk specific gravity of the compacted mixture by testing each core according to AASHTO T 166.

The Laboratory will calculate the in-place air voids of each completed lot outside the acceptable range of 2 percent air voids to 8 percent air voids.

The RE will assess a reduction in lot due to nonconformance to air voids according to the Table 401.03.03-3.

Table 401.03.03-3 Reduction for Nonconformance to Air Voids Requirements	
Lot Average Air Void Value (Five Samples)	Reduction Per Lot (Percent of Lot)
0.0 to 1.9	10
2.0 to 8.0	0
8.1 to 9.0	5
9.1 to 10.0	15
10.1 to 12.0	30
Over 12.0	Remove & Replace

If the average air voids for the lot is greater than 12.0 percent, remove and replace the lot. The replacement work is subject to the same requirements as the initial work.

401.03.03 I THICKNESS REQUIREMENTS

THIS SUBSECTION IS REPLACED BY THE FOLLOWING:

I. Thickness Requirements.

Thickness requirements will apply when full-depth, uniform-thickness HMA pavement construction is shown.

Pavement lots are defined as approximately 15,000 square yards of pavement area. The Engineer will not include areas consisting of different HMA mixtures or thicknesses in the same lot. If thickness lot area is less than 5000 square yards, the engineer may waive the thickness requirements.

The RE will designate an independent testing agency (Laboratory) to perform the quality assurance sampling, testing and analysis. The Laboratory is required to be accredited by the AASHTO Accreditation Program (www.amrl.net). The Laboratory's accreditation must include AASHTO T 166 and AASHTO T 209.

The Laboratory Technician who performs the quality assurance sampling shall be certified by the Society of Asphalt Technologists of New Jersey as an Asphalt Plant Technologist, Level 1.

The Laboratory will test for thickness using the full-depth cores taken for surface course air voids, evaluated according to NJDOT B-4. The Laboratory will base acceptance on total thickness and thickness of the surface course.

- 1. Total Thickness.** The Laboratory will calculate the percent defective (PD) as the percentage of the lot that is less than the design thickness. The Department will base total thickness acceptance on the percentage of the lot estimated to fall below the specified thickness as follows:

- a. **Sample Mean (\bar{X}) and Standard Deviation (S) of the N Test Results (X_1, X_2, \dots, X_N).**

$$\bar{X} = \frac{(X_1 + X_2 + \dots + X_N)}{N}$$

$$S = \sqrt{\frac{(X_1 - \bar{X})^2 + (X_2 - \bar{X})^2 + \dots + (X_N - \bar{X})^2}{N - 1}}$$

- b. **Quality Index (Q_L).**

$Q_L = (\bar{X} - T_{des})/S$, and T_{des} is the design thickness.

- c. **Percent Defective (PD).** Using [NJDOT ST](#) for the appropriate sample size, determine the percentage of material (PD) falling below the design thickness associated with Q_L (lower limit).
- d. **Reduction in Payment.** The Department will determine the reduction in payment based on the quantity of the surface course multiplied by the percent reduction in payment from Table 401.03.03-5.

Table 401.03.03-5 Reduction in Payment for Nonconformance to Requirements for Total Thickness

Percent Defective	Percent Reduction
0 to 25.0	0
25.1 to 30.0	2
30.1 to 35.0	5
35.1 to 40.0	10
40.1 to 45.0	20
Over 45.0	Remove & Replace

- e. **Removal and Replacement.** If the lot PD ≥ 45 , remove and replace, or mill and overlay, the lot. The replacement work is subject to the same requirements as the initial work.
2. **Surface Course Thickness.** The Laboratory will evaluate the surface course solely to determine whether a remove-and-replace or an overlay condition exists, not for pay adjustment. The Laboratory will calculate the percent defective (PD) as the percentage of the lot that is less than the allowable thickness for the nominal maximum aggregate used in the surface course. The Laboratory will accept pavement lots with PD ≤ 25 and will reject pavement lots with PD > 25 .

The Laboratory will base surface thickness acceptance on the percentage of the lot estimated to fall below the allowable thickness as follows:

- a. **Sample Mean (\bar{X}) and Standard Deviation (S) of the N Test Results (X_1, X_2, \dots, X_N).** Calculate using the formula as specified in [401.03.03.1.1](#).
- b. **Quality Index (Q).**

$Q_L = (\bar{X} - T_{all})/S$, where T_{all} is the minimum allowable thickness from Table 401.03.03-6.

Table 401.03.03-6 Surface Course Thickness Requirements	
HMA Mix Design Size Designation	Minimum Allowable Compacted Lift Thickness (T_{all})
4.75 MM	0.75 inch
9.5 MM	1.00 inch
12.5 MM	1.25 inches
19 MM	2.00 inches

- c. **Percent Defective.** Using [NJDOT ST](#) for the appropriate sample size, determine the percentage of material (PD) falling below the allowable thickness associated with Q_L (lower limit).
- d. **Removal and Replacement.** If the surface course fails to meet the acceptance requirement with a $PD \leq 25$, the Department will require removal and replacement of the lot. The replacement work is subject to the same requirements as the initial work.

REPLACE 401.03.03.J WITH THE FOLLOWING:

- J. **Ride Quality Requirements.** The Department may evaluate the HMA surface course placed in travel lanes using the International Roughness Index (IRI) according to ASTM E 1926. Other areas will be tested with a ten foot straight edge. The Department will use the measured IRI and straight edge to compute pay adjustment (PA). The PA will be negative for defective work.

The RE will designate an independent testing agency to perform the ride quality testing and analysis. The testing agency is required to comply with certification requirements according to NJDOT R-1.

The Department will calculate the Pay Adjustment (PA) as specified in Table 401.03.03-7 and will base PA on lots of 0.01mile length for each travel lane.

1. Smoothness Measurement.

The testing agency will test the longitudinal profile of the HMA surface course for ride quality with a Class 1 Inertial Profiling System according to AASHTO MP 11 approved according to AASHTO PP 49.

The testing agency will test the full extent of the pavement in the direction of travel in each wheel path. The single IRI value reported for each 0.01-mile lot of pavement is the average of 3 runs.

2. Other Areas.

In addition to the above, a 10-foot straightedge shall be used for the following areas: transverse profile of the finished riding surface, longitudinal and transverse profile of shoulders and ramps, utility hardware, drainage inlets and manholes, and any other areas so designated in the Special Provisions. Any areas that have more than a 1/4-inch deviation between any two contact points of the straightedge shall be corrected by the Contractor using infrared heating to rework the material in a manner approved by the Engineer. Following correction, the area will be retested to verify compliance, each individual non-complying location will be assessed \$250 negative PA.

3. Control Testing.

Perform control testing during HMA placement to ensure compliance with the ride quality requirements specified in Table 401.03.03-7.

4. Preparation for IRI Testing.

Provide the necessary traffic control when the testing agency performs IRI testing. Perform required mechanical sweeping of the surface course before IRI testing. To facilitate auto triggering on laser profilers, place a single line of preformed traffic marking tape perpendicular to the roadway baseline 300 feet before the beginning of each lane to be tested.

5. Acceptance.

The Engineer will determine acceptance and make payment adjustments based on the following:

i. Pay Adjustment.

The pay equations in Table 401.03.03-7 express the pay adjustment in dollars per lot of 0.01 mile. For lots of any other length, the Engineer will scale the pay adjustment up or down in proportion to the actual length of the lot. IRI numbers are in inches per mile.

Table 401.03.03-7 Pay Equations for IRI Ride Quality for 0.01 Mile

Local Roadways with Posted Speed \geq 45 MPH	IRI \leq 100	PA = \$0
	100 < IRI \leq 170	PA = (IRI - 100) \times (- \$1.43)
	IRI > 170	Remove & Replace
Local Roadways with Posted Speed < 45 MPH	IRI \leq 120	PA = \$0
	120 < IRI \leq 220	PA = (IRI - 120) \times (- \$1.00)
	IRI > 220	Remove & Replace

ii. Retest provision.

After testing, if the IRI exceeds the Remove and Replace value (RRV) in Table 401.03.03-7, the testing agency will retest the lot. The testing agency will average the IRI values from the initial test and the retest to determine the final result.

iii. Removal and Replacement.

If the average IRI is greater than the RRV after a retest is performed, remove and replace the lot. Any replacement work is subject to the same requirements as the initial work. If only a small percentage (less than 8 percent) of paving lots falls under the RRV, the RE may allow the contractor to submit a plan for corrective action. If the contractor's plan for corrective action is not approved, the RE may require removal and replacement, or may allow the lot to remain in place and the lot will be subject to the pay adjustment as computed in table 401.03.03-7 <http://www.state.nj.us/transportation/eng/specs/2007/spec400.shtm - t40103037>. If the contractor's plan for corrective action is approved and the lot is reworked, the testing agency will test and evaluate it as a new lot that must meet the same requirements as the initial work.

401.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

Item
ASPHALT AREA

Pay Unit
SQUARE YARD

DIVISION 500 – BRIDGES AND STRUCTURES

SECTION 510 – TIMBER STRUCTURES

510.01 DESCRIPTION

THE FOLLOWING IS ADDED:

This section also describes the construction of the 30' pavilion and associated foundation as specified on the contract drawings.

510.02 MATERIALS

THE FOLLOWING IS ADDED:

Contractor is to determine and provide all equipment and materials deemed necessary to perform job.

THE FOLLOWING SUB-SECTION IS ADDED:

510.03.03 30' PAVILION

The Pavilion selected is based on the "30' Cedar Octagon Gazebo" by "GazeboCreations.com" (Item # [COG3000]) in red cedar, with a single roof, 30' size, octagon shape, and no deck. It is the contractor's responsibility to purchase and construct the specified pavilion. The pavilion will be secured to a concrete slab as specified in the contract drawings. The pavilion will be secured as per the manufacturers specifications.

510.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

Item
30" PAVILION

Pay Unit
LUMP SUM

DIVISION 600 – MISCELLANEOUS CONSTRUCTION

SECTION 601 – PIPE

601.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
12" REINFORCED CONCRETE PIPE	LINEAR FOOT
15" REINFORCED CONCRETE PIPE	LINEAR FOOT

SECTION 602 – DRAINAGE STRUCTURES

602.01 DESCRIPTION

THE FOLLOWING IS ADDED:

This Section also describes the requirements for constructing outlet control structures.

602.03 CONSTRUCTION

THE FOLLOWING IS ADDED:

602.03.09 OUTLET CONTROL STRUCTURE

This section describes the requirements for constructing outlet control structures. The contractor should install all outlet control structures, including trash racks, anchor bolts and aluminum safety frame, as specified on the "outlet structure" detail in the contract drawings, or as otherwise directed by Engineer. Concrete slab and chambers should be precast from 3000psi concrete. The base of the outlet structure should be sloped with concrete or grouting material so that water may freely flow between infall and outfall pipes. Trash racks should be secured to the outlet structure with 8 stainless steel ASTM F-593 Type 316 anchor bolts in the locations specified in the contract drawings. Anchor bolts should be adhesive anchors with a minimum embedment of 12 times the bolt diameter and a minimum edge distance of 6 times the bolt diameter with a 2-inch minimum. Trash racks should be ASTM B-209 Type 2021 aluminum frames, aluminum rounds should be ASTM B-211 Type 6061, and all aluminum should be welded in accordance with AWS D1.2. Any aluminum in contact with concrete, grout, or dissimilar metals should be coated with a heavy bituminous paint. If outlet control structures do not meet the requirements specified by the engineer, it will be the contractor's responsibility to make corrections to the approval of the Engineer, at no additional cost to the owner.

602.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
OUTLET CONTROL STRUCTURE	UNIT
CONCRETE HEADWALL	UNIT

SECTION 603 –SLOPE AND CHANNEL PROTECTION

603.01 DESCRIPTION

THE FOLLOWING IS ADDED:

This section also describes the construction of a rip-rap apron within the bioretention basin as specified on the contract drawings.

THE FOLLOWING SUB-SECTION IS ADDED:

603.03.06 RIP-RAP APRON

Excavate as specified in 202.03.03. Shape and compact the underlying material to produce a firm, even surface.

Place geotextile over the entire area where riprap is to be placed and extend it at least 12 inches on each side. Bury the geotextile that is extended outside of the riprap area a minimum of 6 inches into the soil. When joining sections of geotextile, overlap the geotextile by a minimum of 18 inches in the direction of flow.

Place a 12-inch layer of coarse aggregate without damaging or dislodging the geotextile. Firmly bed the riprap stones into the coarse aggregate without damaging or displacing the geotextile. Use larger riprap stones in the lower courses. Fill spaces between the riprap stones with smaller stones of the same type and quality. Firmly ram the smaller stones into place. Provide an even, finished surface for the riprap apron.

603.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

Payment will be made for Item as follows:

Item
RIP-RAP APRON, 12" THICK (D₅₀=6")

Pay Unit
SQUARE YARD

SECTION 605 - FENCE

605.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

Payment will be made for Item as follows:

Item
6' TALL FENCE
FENCE GATE

Pay Unit
LINEAR FOOT
UNIT

SECTION 606 - GENERAL INFORMATION

606.01 DESCRIPTION

DELETE THIS ENTIRE SUB-SECTION AND REPLACE WITH THE FOLLOWING:

This Section describes the requirements for constructing sidewalks, driveways, islands, concrete sidewalks, driveways, pavilion foundation, dog enclosure base, and all walking surfaces.

606.02 MATERIALS

ADD THE FOLLOWING MATERIALS:

Crushed Stone Aggregate
Dense Grade Aggregate Base Course
¾" Crushed Stone
1-1/2" Clean Crushed Stone
Steel Edging ¼" Thick
Stabilization Geotextile
16" Metal Stakes

606.03.03 DETECTABLE WARNING SURFACES

THE FOLLOWING IS ADDED TO THIS SUBSECTION:

Materials for Detectable Warning Surfaces will be safety red, unless otherwise directed by the RE, and should appear uniform in color after curing. The surface coating material

will be an abrasion, UV and chemical resistant, and capable of adhering to existing or new portland cement concrete surfaces. The minimum final dry coat thickness will be 40 mils.

The cured coating will exhibit the following minimum coefficients of friction when tested according to ASTM D 1894:

Static coefficient of friction
Dry 0.95 – 0.99
Wet 1.39 – 1.42

Dynamic coefficient of friction
Dry 0.91 – 0.95
Wet 1.27 – 1.36

THE FOLLOWING IS ADDED TO THIS SECTION:

The Contractor shall construct all sidewalks, handicap ramps and pedestrian facilities within the public right-of-way or easements in full compliance with the “Proposed Accessibility Guidelines for Pedestrian Facilities in the Public “Right-of-Way” located at <http://www.access-board.gov/prowac/nprm.htm> as published in the Federal Register on July 26, 2011 and the Manual on Uniform Traffic Control Devices (MUTCD). Workmanship and materials shall be in conformance with the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction as amended and supplemented by County and/or Municipal requirements. The Contractor is notified that the improperly constructed ramps and facilities, as determined by the Municipality and/or County, will require replacement with compliant ramps and facilities at the sole cost and expense of the Contractor.

ADD THE FOLLOWING SUB-SECTIONS:

606.03.04 DOG PARK GRAVEL BASE

This item should be constructed as specified in the Dog Enclosure Area Cross Section detail of the contract drawings. All labor, equipment and material necessary to furnish and install the gravel base shall be included under this item.

A. Standards:

1. Comply with ANSI, OSHA, ASTM and all applicable Federal, State and local codes including revisions to date of contract.
2. Referenced Specifications:

New Jersey Department of Transportation Standard Specifications for Road and Bridge construction, dated 2019, plus addenda when referred to, shall become part of this specification for materials and construction requirements. A referenced Pay Item Number shall serve to describe the required work for this project providing material and construction conforming to all applicable requirements under the NJDOT Specifications except for measurement and payment. The measurement and payment section of the NJDOT

Specifications shall **not** apply as all work under this section shall be included in the contractor's lump sum and unit price bid for this Contract. Where the referenced specifications cite requirements differing from those included in these specifications, the more stringent, highest quality shall govern.

B. Qualifications of Manufacturers:

Products used in the work of this Section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the Engineer.

C. Submittals

1. General: Submit shop drawings in accordance with Section 104.02.03, Submittals.
2. Product Data:
 - (i) Manufacturer's specifications and other data required to demonstrate compliance with the specified requirements;
 - (ii) A complete materials list showing all items to be furnished and installed under this Section, and
 - (iii) Design mix and laboratory.
 - (iv) Submit 1-gallon samples of stabilized decomposed granite material.
3. Protection: Use all means necessary to protect the equipment and materials of this section before, during and after installation and to protect the installed equipment and materials of other trades. Do not allow traffic on stabilized decomposed granite surfacing for four days after placement or until compacted stabilized decomposed granite has fully cured. The contractor must protect stabilized decomposed granite surfacing from damage until Project completion. Repair damaged areas to match specified requirements.
4. Replacements: In the event of damage, the Contractor shall immediately make all repairs and/or replacements necessary, to the approval of the Engineer and at no additional cost to the Owner.

E. Products

The gravel base shall be installed in areas as indicated on contract drawings or as directed by the Engineer. The base shall conform to the material requirements of the following:

1. Surface Course: Gradation, in accordance with ASTM C136.

4 (4") inch, 1/2" minus crushed rock derived from hard rock processed in a quarry. Particle sizes range from 1/2" to dust.

The surface material shall consist of the following gradation:

<u>Sieve Size</u>	<u>% Passing</u>
1/2"	100
3/8"	90-100
#4	50-100
#30	25-55
#100	10-20
#200	5-18

2. Dense Grade Aggregate, 2" Thick – NJDOT Section 302 & 901.10
3. Non-woven geotextile material
4. Subbase Course: Native soil

The Contractor shall clear vegetative debris, excavate soil, and install the gravel base as shown on the Contract Drawing or directed by Engineer.

G. Delivery, Storage and Handling

1. Protect stabilized decomposed granite mix from contamination. Store under cover.
2. Do not install stabilized decomposed granite surfacing when sub-base is wet at saturated field capacity.

H. Preparation

1. Excavate to depth required so edges of stabilized decomposed granite surfacing will match adjacent grades.
2. Do not install stabilized decomposed granite surfacing when sub-base is wet at saturated field capacity.
3. Geosynthetic Fabric: Do not extend beyond limits of stabilized decomposed granite surfacing.
4. Base Course: Install flush with stabilized decomposed granite surfacing. Provide sufficient stakes to secure in place.

I. Installation

1. Install DGA in accordance with Section 302 and 901.10 of the 2007 NJDOT Standard Specifications. Apply tread surfacing and stabilizer (as specified by the manufacturer) evenly across the specified width of the trail tread and compact in 2" lifts. Ensure that the tread has an out slope of 3 to 5 percent or crowning of 2.5 percent. Add surfacing where needed and compact (after +/- 4 hours) using a 3 to 5 ton roller. The material must be compacted with sufficient moisture content to bind together, as directed by the engineer. Measure cross slope again. Repeat process as necessary until cross slope is in the acceptable range.
2. Completed surface shall be of consistent quality and free of deleterious materials such as organic materials, nails, stones, and loose material.

J. Inspection

Examine the areas and conditions under which work of this Section will be installed. Correct conditions detrimental to proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected.

606.04 MEASUREMENT AND PAYMENT

ADD TO THIS SECTION

Payment will be made for Items as follows:

<i>Item</i>	<i>Pay Unit</i>
DOG PARK GRAVEL BASE	SQUARE YARDS
WALKWAYS	SQUARE YARDS
PAVILION FOUNDATION	SQUARE FEET

SECTION 607 – CURB

607.03.02 CONCRETE VERTICAL CURB AND CONCRETE SLOPING CURB

607.03.01D. Placing Concrete.

THE THIRD SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Do not construct concrete curb between November 1 to March 15, except as approved by the RE.

607.04 MEASUREMENT AND PAYMENT

ADD TO THIS SECTION

Payment will be made for Items as follows:

<i>Item</i>	<i>Pay Unit</i>
CONCRETE CURB	LINEAR FEET

SECTION 610 – TRAFFIC STRIPES

610.04 MEASUREMENT AND PAYMENT

DELETE THIS ENTIRE SUB-SECTION AND REPLACE WITH THE FOLLOWING:

Payment will be made for Item as follows:

<i>Item</i>	<i>Pay Unit</i>
PARKING STRIPES AND MARKINGS	LUMP SUM

SECTION 612 – SIGNS

612.01 DESCRIPTION

ADD THE FOLLOWING SENTENCE:

The Contractor shall provide all labor, material and equipment necessary to install all signs in accordance with the details and construction plan provided within the contract drawings.

612.04 MEASUREMENT AND PAYMENT

ADD TO THIS SECTION:

Payment will be made for Item as follows:

<i>Item</i>	<i>Pay Unit</i>
ADA SIGNS	UNIT

SECTION 613 – BIORETENTION BASIN

THE ENTIRE SECTION IS ADDED:

613.01 DESCRIPTION

This Section describes the requirements for bioretention basin (rain garden) as shown on the contract drawings.

613.02 MATERIALS

Contractor is to determine and provide all equipment and materials deemed necessary to perform job.

613.03 BIORETENTION BASIN

The contractor is responsible to construct bioretention basin as designated by the contract drawings or directed by the RE. The constructed basin shall comply with all applicable design standards specified within the latest revision of the NJ Stormwater Best Management Practices Manual. All labor, equipment and material necessary to furnish and install the basin, including but not limited to, the specified soil bed, sand, gravel, planting, and underdrain system.

613.03.01 SOIL BED

Soil bed should be 18 inches thick and should consist of the following mix by weight: 85-95% sand, with no more than 25% of the sand as fine or very fine sands; no more than 15% silt and clay with 2% to 5% clay content. the entire mix must then be amended with 3 to 7% organics, by weight. Soil mix to have infiltration rates greater than 5 centimeters (2 inches) per hour. The pH of the soil bed material must range from 5.5 to 6.5. Pre-mixed soil must be certified to be consistent with the requirement above by either the vendor or by a professional engineer licensed by the State of New Jersey. The content of any soil mixed on-site must be certified by a professional engineer licensed by the State of New Jersey; in addition, the engineer must be present while the soil is mixed. Soil bed material must be placed in lifts not to exceed 6 inches.

613.03.02 VEGETATION

Basin should be planted as designated by the contract drawings, in accordance with Chapter 7 of the NJ Stormwater Best Management Practices Manual, or directed by the RE.

613.03.03 STABILITY

Basin walls to be stabilized so it will remain stable during normal operation, and storm events.

613.03.04 PERMEABILITY

Contractor to take special care as to not over compact soil within the basin. If soil is over compacted or does not achieve proper infiltration as determined by the engineer, it will be the contractor's responsibility to make repairs and/or replacements necessary, to the approval of the Engineer and at no additional cost to the Owner.

613.04 MEASUREMENT AND PAYMENT

Item
BIORETENTION BASIN

Pay Unit
LUMP SUM

SECTION 614 – BENCHES

THE ENTIRE SECTION IS ADDED

613.01 DESCRIPTION

This section describes the requirements for installing benches as shown on the contract drawings.

613.02 MATERIALS

Contractor is to determine and provide all equipment deemed necessary to perform job.

613.03 BENCHES

The contractor should install benches and bench bases as specified in the details 6' Long Bench Detail and Bench Base Detail in the contract drawings, or as otherwise directed by Engineer. Benches should be permanently affixed to the ground with four anchor bolts anchored into the concrete footing. Bench bases should be stable. Powder-coating finishes should be in good condition and without damage. If benches do not meet the requirements specified by the Engineer, it will be the contractor's responsibility to make corrections to the approval of the Engineer and at no additional cost to the owner.

613.04 MEASUREMENT AND PAYMENT

Payment will be made for Item as follows:

Item
BENCH

Pay Unit
UNIT

DIVISION 650 – UTILITIES

SECTION 651 – WATER

651.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
10" WATER LINE	LINEAR FOOT

DIVISION 700 – ELECTRICAL

SECTION 701 – GENERAL ITEMS

701.02.01 MATERIALS

THE FOLLOWING IS ADDED TO LIST:

Provide materials as specified in:

Panelboards and Circuit Breakers.....	918.10
Time Clocks.....	918.11
Service Equipment.....	918.15
Circuit Breakers.....	918.16

THE FOLLOWING SECTION IS REPLACED IN ITS ENTIRETY:

701.03.02 CONDUIT

701.03.02.01 DESCRIPTION

- A.** Scope:
 - 1.** CONTRACTOR shall provide all labor, materials, equipment and incidentals as shown, specified and required to furnish and install conduit and fittings to form complete, coordinated and grounded raceway systems.

- B.** All conduits shall be as follows except as otherwise shown.
 - 1.** Rigid steel conduit for exposed conduit runs.
 - 2.** Intermediate metallic conduit for exposed conduit runs.
 - 3.** PVC coated rigid steel for exposed conduit runs in corrosive areas.
 - 4.** Schedule 40 PVC for concrete encased duct bank runs or for direct burial.
 - 5.** Schedule 80 PVC for outdoor use under parking lots, roadways and where exposed to physical damage.
 - 6.** Rigid steel for conduit runs embedded in structural concrete slabs.

- C.** Coordination:
 - 1.** Conduit runs shown are diagrammatic.
 - 2.** Coordinate conduit installation with piping, ductwork, lighting fixtures and other systems and equipment and locate so as to avoid any interference.

701.03.02.01.01 QUALITY ASSURANCE

- A.** Reference Standards: Comply with applicable provisions and recommendations of the following except where otherwise shown or specified:
1. NEC Article 344, Rigid Metal Conduit.
 2. NEC Article 352, Rigid Nonmetallic Conduit.
 3. UL Standard No. 6, Rigid Metal Electrical Conduit.
 4. UL Standard No. 514, Electrical Outlet Boxes and Fittings.
 5. UL Standard No. 651, Schedule 40 and 80 PVC Conduit.
 6. UL Standard No. 886, Electrical Outlet Boxes and Fittings for Use in Hazardous Locations.
 7. UL Standard 1242, Intermediate Metallic Conduit.
 8. ANSI C80.1, Specification for Zinc Coated Rigid Steel Conduit.
 9. ANSI C80.4, Specification for Fittings for Rigid Metal Conduit and Electrical Metallic Tubing.
 10. NEMA TC2, Electrical Plastic Tubing, Conduit and Fittings.
 11. NEMA TC3, PVC Fittings for Use with Rigid PVC Conduit and Tubing.

701.03.02.01.02 SUBMITTALS

- A.** Shop Drawings: Submit for approval the following:
1. Manufacturer's catalog cuts and technical information for the conduit, fittings and supports proposed for use.
 2. Layout drawings showing proposed routing of exposed conduits, conduits embedded in structural concrete and conduits directly buried in earth. Drawings shall show locations of pull and junction boxes and all penetrations in walls and floor slabs.
- B.** Record Drawings: Include the actual routing of exposed and concealed conduit runs on record drawings.

701.03.02.02 MATERIALS

- A.** Rigid Steel Conduit, Elbows and Couplings:
1. All rigid galvanized conduit installed below grade or outdoors shall have threads generously coated with Thomas & Betts "Kopr-Shield". In addition, all direct burial rigid galvanized conduit shall be thoroughly coated with Koppers bitumastic.
 2. Material: Rigid, heavy wall, mild steel, hot dip galvanized, smooth interior, tapered threads and carefully reamed ends; 3/4-inch NPS minimum size.
 3. Manufacturer: Provide rigid steel conduit and fittings of one of the following:
 - a. Allied Tube and Conduit Corporation.
 - b. Republic Steel Corporation.
 - c. Triangle PWC Incorporated.
 - d. Or equal.

- B. PVC Coated Rigid Steel Conduit, Elbows and Couplings:**
1. Material: Rigid, heavy wall, mild steel, hot dip galvanized, smooth interior, tapered threads, carefully reamed ends, 3/4-inch NPS minimum size with a factory coating of 40 mil thick polyvinyl chloride.
 2. Color: Color of coating shall be the same on all conduit and fittings.
 3. Manufacturer: Provide PVC coated rigid steel conduit and fittings of one of the following:
 - a. Robroy Industries.
 - b. Republic Steel Corporation.
 - c. Or equal.
- C. Intermediate Metallic Conduit, Elbows and Couplings:**
1. Material: Rigid-type steel, work-hardened, hot-dip galvanized, smooth interior, tapered threads and carefully reamed ends; 3/4-inch NPS minimum size.
 2. Couplings: Same as for rigid steel conduit.
 3. Elbows: Factory formed of same material specification as for intermediate metallic conduit.
 4. Manufacturers: Provide intermediate metallic conduit of one of the following:
 - a. Allied Tube and Conduit Corporation.
 - b. Republic Steel Corporation.
 - c. Or equal.
- D. Electric Metallic Tubing (EMT) Conduit, Elbows and Couplings**
1. Material: Conduit fittings shall be cast type of nonferrous metal thoroughly coated inside and outside with metallic zinc or cadmium after all machining has been completed. Covers shall be of the same material as the fittings to which they are attached and shall be screwed on with rubber or neoprene gaskets between the covers and fittings.
 2. Manufacturer: Provide EMT conduit and fittings as manufactured by one of the following
 - a. Bethlehem Steel Corp.
 - b. Youngstown Steel Corp.
 - c. The U.S. Steel Corp.; Republic Steel Corp.
 - d. Or equal.
- E. PVC Conduit:**
1. Material: Schedule 40 PVC plastic, NEMA Type EPC-40-PVD, 90°C rated, conforming to UL No. 651.
 2. Manufacturer: Provide non-metallic conduit of one of the following:
 - a. Amoco Chemicals Corporation.
 - b. Carlon, Division of Indian Head, Incorporated.
 - c. Or equal.

3. Non-metallic Fittings: Form elbows, bodies, terminations, expansions and fasteners of same material and manufacturer as base conduit. Provide cement by same manufacturer as base conduit.
- F. Metallic Conduit Fittings and Outlet Boxes:**
1. Material and Construction: Cast gray iron alloy, cast malleable iron bodies and covers. Outdoor units to be gasketed and watertight. Gaskets to be of an approved type designed for the purpose. Improvised gaskets are not acceptable. All units to be threaded type with five full threads. Material to conform to ANSI C80.4 and be listed by UL. Fittings and boxes on PVC coated conduit runs to have a factory-applied coating of 40 mil thick polyvinyl chloride. The use of "LB" fittings shall be avoided and type "LBD" fittings applied wherever the use of fittings is unavoidable.
 2. Manufacturer: Provide metallic conduit fittings and outlet boxes of one of the following:
 - a. Crouse-Hinds Company.
 - b. Appleton Electric Company.
 - c. Or equal.

701.03.02.03 INSTALLATION

- A. Exposed Conduit:**
1. Install parallel or perpendicular to structural members or walls.
 2. Wherever possible, run in groups. Provide galvanized conduit racks of suitable width, length and height and arranged to suit field conditions. Provide support at every ten feet minimum.
 3. Install on structural members in protected locations.
 4. Locate clear of interferences.
 5. Maintain 12 inches from hot fluid lines and 1/4 inch from walls. Where it is impractical to maintain 12 inches of separation, the contractor shall insulate the source of high temperature as approved by the Engineer.
 6. Install vertical runs plumb. Unsecured drop length not to exceed 12 feet.
- B. Conduit Embedded in Concrete:**
1. Separation: Three times outer diameter of larger conduit center to center.
 2. Minimum Slab Thickness:
 - a. With no crisscrossing of conduit, three times outer diameter of conduit.
 - b. With crisscrossing of conduits, four times outer diameter of larger conduit.
 3. Run conduit in center of slab.
 4. Before concrete is placed, make the necessary location measurements of the conduit to be embedded so that the information is available to prepare record drawings.

5. Red indicating device shall be installed 6" above conduit or duct bank.

C. PVC Conduit:

1. Install in accordance with manufacturer's recommendations.
2. Join sections in accordance with manufacturer's installation procedures for push-fit, bell and spigot type joints, if applicable or with manufacturer's recommended cement.
3. During installation, provide expansion fittings for expansion and contraction to compensate for temperature variations. Expansion fittings shall be watertight and of the type suitable for direct burial.
4. Make transition to intermediate or rigid steel conduit before making turn up to enclosures.
5. Provide watertight expansion/deflection fittings at all wall and floor penetrations of all buildings and equipment concrete pads.

D. Underground Conduits:

1. Install individual underground conduits a minimum of 24 inches below grade unless otherwise indicated.
2. Perform all excavation, bedding, backfilling and surface restoration including pavement replacement where required.
3. Make conduit connections watertight.
4. Protect metallic conduits from corrosion by one of the following means:
 - a. Provide three inches of concrete all around conduits.
 - b. Tape conduits with an all-weather polyvinyl chloride plastic tape with a high tack adhesive formulated to resist corrosion, Scotchwrap Brand 50 or equal.
 - c. Apply 2 coats of a bitumastic coating.
5. Red indicating device shall be installed above conduit or duct bank.

- E.** Installation: Except as shown, the minimum size conduit permitted is 3/4 inch for exposed work and one inch for conduit encased in concrete or mortar.

- F.** All bolts and hardware for fastening, etc., shall be cadmium plated.

- G.** Conduits shall not contain the equivalent of four 90-degree bends without the use of a pull/junction box approved for the purpose and in accordance with National Electric Code.

- H.** All conduit extending through the floor behind panels or into control centers or similar equipment shall extend a minimum of six inches above the floor elevations, with no couplings at floor elevations.

- I.** Conduit installed in concrete or other masonry shall be so arranged that a minimum of three inches of covering is obtained. Spacing between conduits shall be sufficient to permit a complete filling with concrete or mortar without voids.

- J.** Conduits passing through sleeves in interior walls and floors shall be tightly sealed with an NFPA approved fire rated caulk.
- K.** Install in conformance with National Electrical Code (NFPA 70) requirements.
- L.** Supports:
1. Rigidly support conduits by clamps, hangers or Unistrut channels.
 2. Support single conduits by means of one-hole pipe clamps in combination with one-screw back plates, to raise conduits from the support surface. Support multiple runs of conduits on trapeze type hangers with steel horizontal members and threaded hanger rods, Kindorff or equal. Rods shall be not less than 3/8-inch diameter, and shall be cadmium coated.
 3. For PVC coated rigid steel conduit runs, supports and hardware shall be PVC coated or stainless steel.
 4. Conduit and/or conduit fittings shall not be welded together or to any steel structure; however, conduit supports may be welded to flanges of steel beams, columns, etc., in accordance with approved welding techniques and engineering practice.
- M.** Fastenings: Fasten raceway systems rigidly and neatly to supporting structures by the following methods:
1. To Wood: Wood screws.
 2. To Hollow Masonry Units: Toggle bolts.
 3. To Brick Masonry: Price expansion bolts, or equal.
 4. To Concrete: Phillips, Hilti Corporation or equal anchors.
 5. To Steel: Welded threaded studs, beam clamps or bolts with lockwashers or locknuts.
- N.** Empty Conduits:
1. Install nylon pull wire in each empty conduit and cap conduits not terminating in boxes with permanent fittings designed for the purpose.
 2. Identify each empty conduit with a durable tag showing the conduit number indicated on the Drawings.
- O.** Field Bends: Factory bent elbows or field bent elbows with approved tools may be used. Heating of conduit to facilitate bending is prohibited with the exception of PVC conduit where nonstandard bends are required. No indentations are allowed. Diameter of conduit shall not vary more than 15 percent at any bend.
- P.** Joints:
1. Apply conductive compound to all joints before assembly.
 2. Make up joints tight and ground thoroughly.

3. Use standard tapered pipe threads for conduit and fittings.
4. Cut conduit ends square and ream to prevent damage to wire and cable.
5. Use full threaded couplings. Split couplings not permitted.
6. Use strap wrenches and vises to install conduit. Replace conduit with wrench marks.
7. Apply zinc-rich paint to exposed threads and other areas of galvanized conduit system where the base metal is exposed.
8. Approved conduit expansion joints shall be provided wherever conduit crosses a structural expansion joint, is attached between two separate structures, and wherever the conduit run is 100 ft or more in a single straight length.

Q. Terminations:

1. Install insulated bushings on conduits entering boxes or cabinets, except threaded hub types.
2. Provide locknuts on both inside and outside of enclosure for grounding.
3. Bushings not to be used in lieu of locknuts.
4. Connections from rigid conduit to motors, limit switches, solenoid valves, level controls, etc., shall be made with short lengths of liquid-tight flexible neoprene jacketed metal conduit. These lengths shall be provided with appropriate connectors with devices which will provide an excellent electrical connection between equipment and the rigid conduit for the flow of ground current.

R. Moisture Protection:

1. Plug or cap conduit ends at time of installation to prevent entrance of moisture or foreign materials.
2. Make underground and embedded conduit connections watertight.
3. Thruwall Seals: Install for conduits passing through new exterior subsurface walls or base slabs of buildings and for conduits passing through existing exterior walls. For individual exposed conduits passing through interior walls, install non-metallic sleeves to protect the conduit against action of alkaline substances, which may be present.
4. Drainage: Pay particular attention to drainage for conduit runs. Wherever possible, install conduit runs so as to drain to one end and away from buildings. Avoid pockets or depressions in conduit runs.

S. Corrosion Protection:

1. Conduit Curb:
 - a. In concrete slabs or floors, provide a two inch high curb extending two inches from the outer surface of the conduit penetrating the floor, to prevent corrosion.
 - b. Terminate conduit stub-ups in couplings, slightly above the finished concrete curb.

- c. Paint the stub-up with Scotch-Clad Protective Coating #1706 or equal a minimum of 6 inches above and below the finished surface of the concrete.
 - 2. Dissimilar Metals:
 - a. Take every action to prevent the occurrence of electrolytic action between dissimilar metals.
 - b. Do not use copper products in connection with aluminum work, and do not use aluminum in locations subject to drainage of copper compounds on the bare aluminum.
 - c. Back paint aluminum in contact with masonry or concrete with two coats of aluminum-pigmented bituminous paint.
 - 3. PVC Coating: Field apply a 40 mil thick polyvinyl chloride coating to supports and fasteners for PVC coated conduit runs.
- T. Reused Existing Conduits:
 - 1. Pull rag swab through conduits to remove water and to clean conduit prior to installing new cable.
 - 2. Repeat swabbing until all foreign material is removed.
 - 3. Pull mandrel through conduit, if necessary, to remove obstructions.
- U. Core drill for individual conduits passing through existing concrete slabs. Obtain authorization from OWNER prior to core drilling. Seal spaces around conduit with epoxy grout. All cutting, channeling and drilling of holes through walls, floors, foundations, and ceilings, required for the correct installation of the electrical work, shall be done by and repaired by the Contractor. The cost of cutting and patching shall be included in the bid. All work shall be finish painted (prime coat and two (2) finish coats) to match the existing finishes. All incidental damage to existing wall, structures etc. shall be refinished to the satisfaction of the owner representative.
- V. The cutting of walls or floors for conduit shall be kept to a minimum. Where such cutting is absolutely necessary care shall be taken so as not to weaken the walls or floor involved. Beams or other structural supports shall not be cut under any condition, except as approved in writing by the Engineer.

701.03.02.03.01 HAZARDOUS LOCATIONS

- A. All conduit work in hazardous locations shall be performed in accordance with Article 500 of the National Electric Code, as shown on the contract drawings and as specified herein.
- B. Conduit entering/exiting any hazardous Class I Division II areas shall have seal fittings installed for the purpose at the barrier between the two areas. A sealing compound ("Chico") shall be poured into fitting(s) after all wiring has been installed and accounted for.

- C. Seal fittings shall also be installed at all devices, control stations, lighting fixtures, etc., which are not factory sealed and UL listed for hazardous locations.
- D. Flexible conduit, solenoid valves, control stations, fittings, junction boxes, etc. utilized in hazardous locations shall be UL listed for use in hazardous areas.
- E. Conduit sleeves/penetrations through floors and walls of hazardous areas shall be thoroughly sealed around the outside with non-shrink grout across the entire floor or wall thickness.

701.03.02.03.02 TELEPHONE CONDUITS

- A. Material and Installation: Telephone conduits shall be of material and size as required by the Telecommunications vendor. Each conduit shall be provided with a continuous 1/8 inch diameter nylon "fish line" pulled through for use by the Telephone Co.

701.03.02.03.03 TESTING

- A. Test conduits by pulling through each conduit a cylindrical mandrel not less than two pipe inside diameters long, having an outside diameter equal to 90 percent of the inside diameter of the conduit.
- B. Maintain a record, by number, of all conduits testing clear.

701.03.02.03.04 IDENTIFICATION

- A. Tag all conduits at the ends and in all intermediate boxes, chambers, handholes and other enclosures. Use durable tags securely fastened appropriate for the environment.

THE FOLLOWING SECTIONS ARE REMOVED IN ITS ENTIRETY:

701.03.03 RIGID METALLIC CONDUIT (ROADWAY)

701.03.04 RIGID METALLIC CONDUIT (EXPOSED)

701.03.05 RIGID NONMETALLIC CONDUIT

701.03.11 JUNCTION BOX FRAME AND COVER

THE FOLLOWING IS ADDED TO THIS SECTION:

701.03.11.01 WORK INCLUDED

- A. The CONTRACTOR shall furnish and install all junction and pullboxes as shown and as required to properly install the electrical systems.
- B. Boxes specified in this Section are of the type which must be utilized where standard octagonal and square sheet steel or cast boxes as specified in 700.03.18 OUTLET BOXES

701.03.11.02 PRODUCTS

701.03.11.02.01 INDOORS

- A.** Pull and junction boxes for dry indoor exposed use shall be galvanized sheet steel with neoprene gasketed screwed-on covers and of all welded construction.
- B.** Boxes for use in hazardous locations shall be cast type NEMA 4 and NEMA 7 cast construction for hazardous areas as manufactured by O.Z. Electric Co., Steel City, or equal. Materials shall be aluminum or galvanized steel. Covers shall be same material as box with screwed-on covers, screws shall be stainless steel.

701.03.11.02.02 OUTDOORS

- A.** Boxes for use outdoors shall be of cast NEMA 3R or where subject to water spray NEMA 4 construction as manufactured by O.Z. Electric Co.; Steel City; Hoffman or equal. Material shall be aluminum or galvanized steel. Covers shall be same material as box with screwed-on covers, screws shall be stainless steel.
- B.** Boxes for underground installation shall be constructed of precast polymer concrete with an open bottom. Boxes shall be equipped with covers of the same material as the box with a minimum load rating of 8000lbs, and the cover shall be securable by two stainless steel bolts.

701.03.11.02.03 GALVANIZING

- A.** Boxes and covers shall be hot dipped or electrogalvanized after fabrication, inside and outside surfaces.

701.03.11.02.04 BOX SIZES

- A.** The size of boxes shall be generous, considering the number and size of conductor and providing generous access for removal of conductors.

701.03.11.02.05 BARRIERS

- A.** Galvanized steel or aluminum barriers shall be provided in junction or pullboxes to isolate conductors of different voltages such as 480 volt, 120 volt ac, dc and instrumentation signal leads. The gage of these barriers shall not be less than the gage of the box required.

701.03.11.03.01 INSTALLATION

- A.** All junction boxes and pullboxes shall be solidly attached to structural members prior to installation of conduit and set true and plumb. Wooden plugs will not be permitted for securing boxes to concrete.
- B.** For locations that require an underground junction box or pullbox, the hole shall be filled with 3" of gravel prior to installation of the box.
- C.** Where control wires must be interconnected in a junction box, terminal boards consisting of an adequate number of screw type terminals shall be installed. Terminal board current carrying parts must be of ample capacity to carry the full load current of the circuits connected thereto. Approximately 20 percent of the total amount of terminals provided shall consist of spare terminals. Terminals shall be lettered and/or numbered to conform with the wiring

diagrams.

- D. All junction boxes and pullboxes shall have identifying nameplates attached thereto.

THE FOLLOWING SECTION IS ADDED:

701.03.17 RECEPTACLES

701.03.17.01 DESCRIPTION

- A. Scope: Contractor shall furnish all labor, materials, equipment and incidentals required to provide receptacles as shown and specified.
- B. Related Work Specified Elsewhere:
 - 1. 700.03.18 Outlet Boxes.

701.03.17.01.01 QUALITY ASSURANCE

- A. Reference Standards: Comply with applicable provisions and recommendations of the following except where otherwise shown or specified:
 - 1. National Electrical Code.
 - 2. UL 498, Standard for Attachment Plugs and Receptacles.
 - 3. UL 943, Standard for Ground-fault Circuit Interrupters.

701.03.17.01.02 SUBMITTALS

- A. Shop Drawings: Submit for approval copies of manufacturer's technical information for receptacles proposed for use.

701.03.17.02 PRODUCTS

701.03.17.02.01 MATERIALS

- A. Dry Locations: Duplex grounding receptacle, two pole, three wire, 125 volt AC, 20 ampere.
 - 1. Product and Manufacturer: Provide one of the following:
 - a. Cat. #5362, by Harvey Hubbell Incorporated.
 - b. Cat. #5362, by Arrow-Hart Wiring Devices.
 - c. Or approved equal.
- B. Damp Locations and Corrosive Locations: Duplex grounding receptacle, corrosion resistant~, two pole, three wire, 125 volt AC, 20 ampere.
 - 1. Product and Manufacturer: Provide one of the following:
 - a. Cat. #53CM62, by Harvey Hubbell Inc.
 - b. Cat. #5362-CR, by Arrow-Hart Wiring Devices.
 - c. Or approved equal.
- C. Ground Fault Circuit Interrupter Receptacles: Provide GFCI receptacles as shown on the Drawings. GFCI receptacles in unclassified areas shall be

duplex grounding, two pole, three wire, 125 volt AC, 20 ampere. When used at outdoor locations, GFCI must be made weather resistant rated.

1. Product and Manufacturer:

- a.** Cat. #GF5362, by Harvey Hubbell Inc.
- b.** Cat. #GF5342, by Arrow-Hart Wiring Devices.
- c.** Or approved equal.

- D.** Power and Special Receptacles: Provide receptacles with number of poles and voltage and current rating as shown on the Drawings. Coordinate with equipment plugs. Provide matching plug for each receptacle. Coordinate with cables provided with equipment.

701.03.17.03 EXECUTION

701.03.17.03.01 INSTALLATION

- A.** Install wiring devices in outlet or device boxes with device cover plates in accordance 700.03.18 Outlet Boxes.
- B.** Install receptacles with ground pole in the down position.
- C.** Mount receptacles 18 inches above finished floor unless otherwise noted.
- D.** Install in conformance with National Electrical Code.

THE FOLLOWING SECTION IS ADDED:

701.03.18 OUTLET BOXES

701.03.18.01 - GENERAL

701.03.18.01.01 WORK INCLUDED

- A.** The CONTRACTOR shall furnish and install all outlet boxes for power and lighting, as shown, specified or required.

701.03.18.02 PRODUCTS

701.03.18.02.01 OUTLET BOXES - EXPOSED

- A.** Outlet boxes for outdoor use exposed use where required for lighting fixtures, switches, receptacles and junction boxes shall be of cast rust resisting metal provided with rubber or neoprene gasketed covers of similar metal. The completed units shall be of NEMA 4 construction or NEMA 7 construction where required in hazardous areas; and of ample size to house the required devices. Covers shall be of the same material as the box.
- B.** Boxes for housing receptacles, switches and similar devices shall be of the deep type.

701.03.18.03 EXECUTION

701.03.18.03.01 OUTLET BOXES

- A.** All outlet boxes required for supporting lighting fixtures shall be provided with fixture studs of sizes suitable for supporting the weight of the fixtures connected thereto. Fixture studs shall not be less than 3/8 in. in diameter and shall be either integral with the box or of the type which is inserted and supported from the back of the box. In no case will the support of a fixture be dependent upon bolts holding the stud to the box.
- B.** Wall outlets shall conform to ADA Regulations and be mounted at a minimum height of 15" above finished floor.
- C.** Install outlet boxes in conformance with the National Electric Code.

THE FOLLOWING PAY ITEM IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
NEW ELECTRIC SERVICE	LUMP SUM

THE FOLLOWING IS ADDED TO THE END OF THIS SUBSECTION:

The item NEW ELECTRIC SERVICE shall comprise of all elements required for a fully installed and operational electrical service in accordance with the project drawings and details, including but not limited to service connection from the existing utility pole, conduit and wiring from power source to main distribution panel, meter, enclosure/mounting equipment, excavation, and all restoration to affected areas due to trenching construction. Contractor to coordinate service connection with applicable utility company, as needed.

The contractor shall be responsible for coordination with the municipal electrical inspector and the utility company to provide service to the facility. Electrical service shall be obtained from the utility company's existing overhead or underground facilities as indicated on the plans, or as directed by the utility company. Service cable connections at the proposed location shall be made by the Contractor. All associated work is included in the lump sum pay item.

THE FOLLOWING SECTION IS ADDED:

ELECTRICAL

701.05.01 - GENERAL

701.05.01.01 APPLICATION

- A.** This Section applies to all sections of Division 701 and 918 of this project, except as specified otherwise in the individual sections.

701.05.01.02 SCOPE OF WORK

- A.** This specification and accompanying drawings are intended to illustrate the nature of work to be performed in a diagrammatic manner. All labor, material, and equipment necessary for a complete electrical installation shall be included by the Contractor in the submission of his bid.
- B.** Appliances, materials or equipment obviously a part of the system necessary for its satisfactory operation, although not specifically mentioned herein nor indicated on the drawings shall be provided by this Contractor without extra cost to the Owner
- C.** Material and equipment mentioned and described in this specification shall be supplied complete in all details. Contractors bidding on this project shall insure themselves that the quotations that they use for equipment have been quoted in accordance with the specifications and the drawings. Errors by manufacturers representatives shall not relieve the Contractor, to provide the proper equipment of the obligation.
- D.** Without intending to limit or restrict the volume of work provided by this section of the contract documents, the work is to generally comprise of the following.

Install a new electrical distribution system including:

- 1.** Installation of a complete electrical system shown on contract drawing,
- 2.** Installation of one (1) new electrical service for lighting,
- 3.** Furnish and install all Wire, Conduit, and all necessary material and equipment,
- 4.** Load center and time clock,
- 5.** Furnish and install all light fixtures as shown on contract drawing.

701.05.01.03 LAWS, PERMITS, AND REGULATIONS

- A.** Obtain and pay for all licenses, certificates and permits required by law, State County, and all Authorities having jurisdiction. Comply with the rules and requirements of the National Board of Fire Underwriters and the current version of the National Electric Code adopted by the NJ DCA and with all governing laws, orders, regulations, and building codes. Any deviation shall be reported to the Owner or its representative in writing, for approval.
- B.** Certificates of approval from the above authorities shall be delivered to the Owner before final payment may be made. This Contractor shall pay the necessary fees for all inspections and certificates.

701.05.01.04 CODES, LISTINGS AND STANDARDS

- A.** All electrical work covered by the Contract Documents shall conform to the Requirements of the National Electrical Code.

- B.** All equipment and materials for which Underwriters' Laboratories, Inc. provides product listing service shall be Underwriter laboratories' approved and bear the U.L. Label.
- C.** Equipment and materials wherever applicable shall conform to the following standards:
 - 1.** Federal Specifications (Fed. Spec.).
 - 2.** Illuminating Engineering Society (IES).
 - 3.** National Electrical Manufacturers Association (NEMA).
 - 4.** Institute of Electrical and Electronic Engineers (IEEE).
 - 5.** American National Standards Institute (ANSI).
 - 6.** Insulated Cable Engineers Associations (ICEA).

701.05.01.05 PROTECTION OF WORK AND MATERIALS

- A.** This Contractor shall be responsible for the proper care and protection of all portions of materials delivered and work prepared by him until completion and acceptance of the work and the issue of certificates in final payment.

701.05.01.06 MATERIALS AND WORKMANSHIP

- A.** All materials shall be new, recently manufactured and of the best quality.
- B.** All work shall be performed in a first-class, neat and workman-like manner by mechanics skilled in their trades.
- C.** Where the words "provide" and "supply" are used in the specifications or on the drawings, they shall be understood to mean the complete work in connection therewith, that is, furnishing, installing, testing, connecting, and warranties of the items specified.

701.05.01.07 SHOP DRAWINGS

- A.** After contract award, this Contractor shall submit all shop drawings for approval within two (2) weeks.

701.05.01.08 PERFORMANCE OF EQUIPMENT

- A.** All materials, equipment, and appurtenances of any kind shown on the drawings, hereinafter specified, or required for the completion of the work in accordance with the intent of these specifications, shall be completely satisfactory and acceptable as regards operation, performance and capacity.
- B.** No acceptance, written or verbal, of any drawings, descriptive data or samples of such material, equipment and/or appurtenances shall relieve the

Contractor of his responsibility to turn over the complete heating, ventilating, and air conditioning installation to the Owner in perfect working order and in complete conformance with the drawings and specifications at the completion of the work.

- C.** Operation, capacity or performance of which does not comply with the requirements of the drawings or specifications, or which is damaged prior to acceptance by the Owner will be held to be defective material and shall be removed and replaced with proper and acceptable materials, equipment and/or appurtenances, or put in proper working order, satisfactory to the Engineer without additional cost to the Owner.
- D.** All moving parts of equipment and appurtenances, shall be properly lubricated by the Contractor and shall be started up and tested by him.
- E.** All equipment shall operate without objectionable noise or vibration as determined by the Engineer. If such objectionable noise or vibration should be produced and transmitted to occupied portions of the building by apparatus, piping, ducts or other parts of the work, any necessary changes, as approved, shall be made without cost to the Owner.

701.05.01.09 DELIVERY AND STORAGE

- A.** Equipment and materials shall be properly stored, adequately protected and carefully handled to prevent damage before and during installation. Equipment and materials shall be handled, stored and protected in accordance with the manufacturer's recommendations and as approved by the Engineer. Electrical conduit shall be stored to provide protection from the weather and accidental damage. Cables shall be sealed, stored and handled carefully to avoid damage to the outer covering or insulation and damage from moisture and weather. Outdoor storage of cable will not be permitted. Damaged or defective items, in the opinion of the Owner's representative, shall be replaced with new items at no additional cost to the Owner.

701.05.01.10 CATALOGED PRODUCTS

- A.** Materials and equipment shall be the cataloged products of manufacturers regularly engaged in production of such materials or equipment and shall be manufacturer's latest standard design that complies with the specification requirements.

701.05.01.11 MANUFACTURER'S RECOMMENDATION

- A.** Where installation procedures are specified to comply with the recommendations of the manufacturer of the material or equipment being installed, printed copies of these recommendations shall be furnished to the

Owner prior to installation. Installation of the item will not be allowed to proceed until the recommendations are received. Failure to furnish these recommendations can be cause for rejection of the material.

701.05.01.12 MECHANICAL REQUIREMENTS

- A.** Conduit and cables as indicated on the drawings/specifications for mechanical equipment, supplied by others, shall be included under this division.

701.05.01.13 COORDINATION

- A.** Electrical work shall be coordinated with Owner's representative and other trades involved in the construction project. Electrical components of mechanical equipment, such as motors, motor starters, control or pushbuttons stations, floats or pressure devices and other devices functioning to control mechanical equipment which are not explicitly shown on the contract drawings but specified in the appropriate sections shall be installed and wired under Divisions 701 and 918 work. All work shall be carefully laid out in advance, coordinating electrical features with architectural, structural and mechanical features of construction.

701.05.01.14 COORDINATION WITH UTILITIES AND OWNER:

- A.** Contractor shall comply with all local Power Company requirements.

701.05.01.15 ENCLOSURES

- A.** Furnish NEMA enclosures to suit location classification, unless otherwise shown on the drawings, or referenced in the specifications. The outdoor area shall be considered as requiring NEMA 3R rated equipment.

701.05.02 – PRODUCTS

701.05.02.01 MATERIALS AND EQUIPMENT

- A.** All materials, equipment, and devices shall, as a minimum, meet the requirements of UL where UL Standards are established for those items, and the requirements of NFPA 70. All items shall be new unless specified or indicated otherwise.

701.05.02.02 CONDUITS AND FITTINGS

- A.** Rigid Steel Conduit, Elbows and Couplings:
 - 1.** All rigid galvanized conduit installed below grade or outdoors shall have all threads generously coated with Thomas & Betts "Kopr-Shield".

In addition, all direct burial rigid galvanized conduit shall be thoroughly coated with Koppers bitumastic.

2. Material: Rigid, heavy wall, mild steel, hot dip galvanized, smooth interior, tapered threads and carefully reamed ends; 3/4-inch NPS minimum size.
3. Manufacturer: Provide rigid steel conduit and fittings of one of the following:
 - a. Allied Tube and Conduit Corporation.
 - b. Republic Steel Corporation.
 - c. Triangle PWC Incorporated.
 - d. Or equal.

B. PVC Coated Rigid Steel Conduit, Elbows and Couplings:

1. Material: Rigid, heavy wall, mild steel, hot dip galvanized, smooth interior, tapered threads, carefully reamed ends, 3/4-inch NPS minimum size with a factory coating of 40 mil thick polyvinyl chloride.
2. Color: Color of coating shall be the same on all conduit and fittings.
3. Manufacturer: Provide PVC coated rigid steel conduit and fittings of one of the following:
 - a. Robroy Industries.
 - b. Republic Steel Corporation.
 - c. Or equal.

C. Intermediate Metallic Conduit, Elbows and Couplings:

1. Material: Rigid-type steel, work-hardened, hot-dip galvanized, smooth interior, tapered threads and carefully reamed ends; 3/4-inch NPS minimum size.
2. Couplings: Same as for rigid steel conduit.
3. Elbows: Factory formed of same material specification as for intermediate metallic conduit.
4. Manufacturers: Provide intermediate metallic conduit of one of the following:
 - a. Allied Tube and Conduit Corporation.
 - b. Republic Steel Corporation.
 - c. Or equal.

D. Electric Metallic Tubing (EMT) Conduit, Elbows and Couplings

1. Material: Conduit fittings shall be cast type of nonferrous metal thoroughly coated inside and outside with metallic zinc or cadmium after all machining has been completed. Covers shall be of the same material as the fittings to which they are attached and shall be screwed on with rubber or neoprene gaskets between the covers and fittings.
2. Manufacturer: Provide EMT conduit and fittings as manufactured by one of the following
 - a. Bethlehem Steel Corp.
 - b. Youngstown Steel Corp.

- c. The U.S. Steel Corp.; Republic Steel Corp.
 - d. Or equal.
- E. PVC Conduit:
 - 1. Material: Schedule 40 PVC plastic, NEMA Type EPC-40-PVD, 90°C rated, conforming to UL No. 651.
 - 2. Manufacturer: Provide non-metallic conduit of one of the following:
 - a. Amoco Chemicals Corporation.
 - b. Carlon, Division of Indian Head, Incorporated.
 - c. Or equal.
 - 3. Non-metallic Fittings: Form elbows, bodies, terminations, expansions and fasteners of same material and manufacturer as base conduit. Provide cement by same manufacturer as base conduit.
- F. Metallic Conduit Fittings and Outlet Boxes:
 - 1. Material and Construction: Cast gray iron alloy, cast malleable iron bodies and covers. Outdoor units to be gasketed and watertight. Gaskets to be of an approved type designed for the purpose. Improvised gaskets are not acceptable. All units to be threaded type with five full threads. Material to conform to ANSI C80.4 and be listed by UL. Fittings and boxes on PVC coated conduit runs to have a factory-applied coating of 40 mil thick polyvinyl chloride. The use of "LB" fittings shall be avoided and type "LBD" fittings applied wherever the use of fittings is unavoidable.
 - 2. Manufacturer: Provide metallic conduit fittings and outlet boxes of one of the following:
 - a. Crouse-Hinds Company.
 - b. Appleton Electric Company.
 - c. Or equal.

701.05.02.03 OUTLET BOXES AND COVERS

- A. Outlet boxes and covers shall be cadmium- or zinc-coated if of ferrous metal and shall conform to UL 514
- B. Cabinets, junction boxes, and pull boxes (with volume greater than 100 cubic inches) shall conform to UL 50. Cabinets, junction boxes, and pull boxes shall be hot-dip zinc-coated if of sheet steel.

701.05.02.04 WIRES AND CABLES

- A. Wires and cables shall meet the applicable requirements of NFPA 70 and UL for the type of insulation, jacket, and conductor specified or indicated. Wires and cables manufactured more than 12 months prior to date of delivery to the site shall not be used.

701.05.02.05 CONDUCTORS

- A.** All conductors shall be XHHW-2 Copper

701.05.02.06 EQUIPMENT MANUFACTURER REQUIREMENTS

- A.** Where Contractor provides equipment whose manufacturer requires copper conductors at the terminations, or requires that only copper conductors be provided between components of equipment, it shall be the Contractor's responsibility to provide copper conductors, or all necessary splices, splice boxes, and other work required to satisfy manufacturer's requirements.

701.05.02.07 MINIMUM CONDUCTOR SIZES

- A.** Minimum size for branch circuits shall be No. 12 AWG; for Class 1 remote control and signal circuits, No. 14 AWG; and for Class 2 low-energy remote control and signal circuits, No. 16 AWG.
- B.** Provide for all service, feeder, branch, control, and signaling circuit conductors. Color shall be green for grounding conductors. Neutrals of more than one system are installed in same raceway or box, the other neutral shall be white with a colored (not green) stripe. The color of the under-grounded conductors in different voltage systems shall be as follows:

<u>3-phase systems</u>	<u>120/208 volts</u>	<u>277/480 volts</u>
Phase A:	black	yellow
Phase B:	red	brown
Phase C:	blue	orange
Neutral	white	grey
 <u>1-phase systems</u>	 <u>120/240 volts</u>	
phase:	black	
phase:	red	
neutral	white	

701.05.02.08 INSULATION

- A.** Unless specified or indicated otherwise, or required to be otherwise by NFPA 70, all power wires shall be 600 volt, type THW, THWN, XHHW, or RHW, except that grounding wire may be type TW; remote control and signal circuits shall be type TW, THW or TF.

701.05.02.09 SPLICES AND TERMINATION COMPONENTS

- A. Splices and termination components shall conform to UL 486A and UL 486B, as applicable for wire connectors, and UL 510 for insulating tapes. Connectors for wires No. 10 AWG and smaller shall be insulated pressure-type in accordance with UL 486A or UL 486C (twist-on splicing connector). Provide solderless terminal lugs on stranded conductors.

701.05.02.10 SWITCHES

- A. Switches serving as motor-disconnect means shall be horsepower rated. Provide heavy duty type switches where indicated, where switches are rated higher than 208 volts, and for double throw switches. Fused switches shall utilize Class R fuseholders and fuses, unless indicated otherwise.

701.05.02.11 FUSES

- A. Provide a complete set of fuses for each fusible switch. Time-current characteristics curves of fuses serving motors or connected in series with circuit breakers or other circuit protective devices shall be coordinated for proper operation; submit coordination data for approval. Fuses shall have a voltage rating not less than the circuit voltage.
 - 1. Fuses shall conform to UL 198C, Class J for 0 to 600 Amps and Class L for 601 to 6000 Amps.

701.05.02.12 MOTORS

- A. Motors shall be NEMA MG1, except sealed (hermetic type) motor compressors shall meet UL 984. Determine specific motor characteristics to insure provision of correctly sized starters and overload heaters. Motors shall be designed to operate at full capacity with a voltage variation of plus or minus 10 percent of the motor voltage rating.

701.05.02.13 PANELBOARDS

- A. Panelboards for use as service disconnecting means shall additionally conform to UL 869. Panelboards shall be circuit breaker equipped. Design shall be such that any individual breaker can be removed without disturbing adjacent units or without loosening or removing supplemental insulation supplied as a means of obtaining clearances as required by UL. Where "spare" is indicated, make provisions for the future installation of a breaker sized as indicated. All panelboards' locks included in the project shall be keyed alike. Directories shall be typed to indicate load served by each circuit and mounted in a holder behind transparent protective covering.

701.05.02.14 PANELBOARD BUSES

- A. Support bus bars on bases independent of the circuit breakers. Main buses and back pans shall be designed so that breakers may be changed without machining, drilling, or tapping. Provide an isolated neutral bus in each panel for connection of circuit neutral conductors. Provide a separate ground bus marked with a green stripe along its front and bonded to the steel cabinet for connecting grounding conductors. Buses shall be copper.

701.05.02.15 CIRCUIT BREAKERS

- A. Circuit breakers shall be ambient compensated thermal magnetic type with interrupting capacity of 22,000 amperes symmetrical minimum. Breaker terminals shall be UL listed as suitable for the type of conductor provided. Plug-in circuit breakers are acceptable.

701.05.02.16 MULTIPOLE BREAKERS

- A. Provide common-trip type with a single operating handle. Breaker design shall be such that an overload in one pole automatically causes all poles to open. Maintain phase sequence throughout each panel so that any three adjacent breaker poles are connected to Phases A, B, and C, respectively.

701.05.02.17 ATTIC STOCK

- A. The contractor shall provide a minimum of 2 spare parts such as switches, receptacles, breakers under 100A and fuses as shown on contract drawing. If fuses are on a 3-phase circuit, a minimum of 6 spares must be supplied. All spare parts must be equivalent to the specified parts.

701.05.03 – EXECUTION

701.05.03.01 GENERAL REQUIREMENTS

- A. Electrical installation shall conform to the requirements of NFPA 70, State and Local Codes, and to the requirements specified herein.

701.05.03.02 WIRING METHODS

- A. Wiring method shall be insulated conductors installed in conduit, except where specifically indicated or specified otherwise, or required by NFPA 70 to be installed otherwise. An insulated equipment grounding conductor shall be provided in all feeder and branch circuits, including lighting circuits.

701.05.03.03 CONDUIT INSTALLATION

- A. Keep conduit at least 6 inches away from parallel runs of flues and steam or hot water pipes. Install conduit parallel with or at right angles to ceilings, walls, and structural members where located above accessible ceilings and where conduit will be visible after completion of project.

701.05.03.04 CONDUIT SUPPORT

- A. Support conduit by pipe straps, wall brackets, hangers or ceiling trapeze. Fasten by wood screws to wood; by toggle bolts on hollow masonry units; by concrete inserts of expansion bolts on concrete or brick; by machine screws, welded threaded studs, or spring-tension clamps on steel work. Threaded C-clamps may be used on rigid steel conduit only. Do not weld conduits or pipe straps to steel structures. The load applied to fasteners shall not exceed one-fourth of the proof test load. Fasteners attached to concrete ceiling shall be vibration and shock resistant. Holes cut to a depth of more than 1-1/2-inches in reinforced concrete beams or to a depth of more than 3/4-inch in concrete joints shall not cut the main reinforcing bars. Fill holes that are not used.
- B. Make changes in direction of runs with symmetrical bends or cast-metal fittings. Make field-made bends and offsets with a hickey or conduit-bending machine. Do not install crushed or deformed conduits. Avoid trapped conduits. Prevent plaster, dirt, or trash from lodging in conduits, boxes, fittings, and equipment during construction. Free clogged conduits of all observations.
- C. Install pull wires in empty conduits in which wire is to be installed by others. The pull wire shall be No. 14 AWG zinc-coated steel or plastic having not less than 200 pounds tensile strength. Leave not less than 12 inches of slack at each end of the pull wire.
- D. Fasten conduits to sheet metal boxes and cabinets with two locknuts where required by NFPA 70. Where insulated bushings are used, and where bushings cannot be brought into firm contact with the box; otherwise, use at least a single locknut and bushing. Locknuts shall be tye type with sharp edges for digging into the wall of metal enclosures. Install bushings on the ends of conduits and provide insulating type where required by NFPA 70.
- E. Flexible connections of short length shall be provided for equipment subject to vibration, noise transmission, or movement; and for all motors. Liquid-tight flexible conduit shall be used in wet locations. A separate ground conductor shall be provided across flexible connections.

701.05.03.05 BOXES, OUTLETS, AND SUPPORTS

- A. Provide boxes in the wiring or raceway systems wherever required for pulling of wires, making connections, and mounting of devices or fixtures. Boxes for

metallic raceways shall be of cast-metal hub type when located in normally wet locations, when surface mounted on outside of exterior surfaces or when exposed up to 7 feet above interior floors and walkways, and when installed in hazardous areas. Boxes in other locations shall be sheet steel. Each box shall have the volume required by NFPA 70 for the number of conductors enclosed in the box. Boxes for use in masonry block or tile walls shall be square-cornered tile-type, or standard boxes having square-cornered tile-type covers. Provide gaskets for cast-metal boxes installed in wet locations and boxes installed flush with the outside of exterior surfaces. Fasten boxes and supports with wood screws on wood, with bolts and expansion shields on concrete or brick, with toggle bolts on hollow masonry units, and with machine screws or welded studs on steel work. Threaded studs driven in by power charge and provided with lockwashers and nuts or nail-type nylon anchors may be used in lieu of wood screws, expansion shield, or machine screws.

- B.** In open overhead spaces, cast boxes threaded to raceways need not be separately supported except where used for fixture support. Support sheet metal boxes directly from the building structure or by bar hangers. Where bar hangers are used, attach the bar to raceway on opposite sides of the box and support the raceway with any approved type fasteners not more than 24 inches from the box. When penetrating reinforced-concrete members, avoid cutting any reinforcing steel.
- C.** Construct of not less than the minimum size required by NFPA 70 of code-gauge aluminum or galvanized sheet steel, except where cast-metal boxes are required in locations specified above, Furnish boxes with screw-fastened covers. Where several feeders pass through a pull box, tag the feeders to indicate clearly the electrical characteristics, circuit number, and panel designation.

701.05.03.06 CONDUCTOR IDENTIFICATION

- A.** Provide conductor identification within each enclosure where a tap, splice, or termination is made. For conductors No. 6 or smaller, color coding shall be by factory-applied color-impregnated insulation. For conductors No. 4 and larger, color coding shall be by plastic-coated self sticking markers, colored nylon cable ties and plates, or heat-shrink type sleeves. Identify control circuit terminations.
- B.** Provide Labels and Identification in accordance with Specification Section 701.06.01, Label.
- C.** Complete and/or modify all panelboard circuit cards to accurately reflect the work done.

701.05.03.07 SPLICES

- A. Make splices in accessible locations. Make splices in conductors No. 10 AWG and smaller with an insulated pressure type connector. Make splices in conductors No. 8 AWG and larger with a solderless connector and cover with an insulation material equivalent to the conductor insulation.

701.05.03.08 COVERS AND DEVICE PLATES

- A. Install with all four edges in continuous contact with finished wall surfaces without the use of mats or similar devices. Plaster fillings will not be permitted. Plates shall be installed with an alignment tolerance of 1/16-inch. The use of sectional type device plates will not be permitted. Plates installed in wet locations shall be gasketed.

701.05.03.09 GROUNDING AND BONDING

- A. Ground all exposed non-current-carrying metallic parts of electrical equipment, metallic raceway systems, grounding conductor in non-metallic raceways, and neutral conductor or wiring systems. Make ground connection at the main service equipment and extend grounding conductor to the point of entrance of the metallic water service. Make connection to the water pipe by a suitable ground clamp or lug connection to a plugged Tee. If flanged pipes are encountered, make connection with the lug bolted to the street side of the flanged connection. Supplement the metallic water service grounding system with an additional make electrode in compliance with NFPA 70. Where ground fault protection is employed, take care that the connection of ground and neutral does not interfere with the correct operation of the fault protection.

701.05.03.10 GROUNDING CONDUCTOR

- A. Provide an insulated, green colored equipment grounding conductor in all feeder and branch circuits. This conductor shall be separate from the electrical system neutral conductor.

701.05.03.11 REPAIR OF EXISTING WORK

- A. Lay out the work carefully in advance. Where cutting, channeling, chasing, or drilling of floors, walls partitions, not ceilings, or other surfaces is necessary for the proper installation, support, or anchorage of the conduit, raceways, or other electrical work, do this work carefully. Repair any damage to buildings, piping, or equipment using mechanics of the trades involved.

701.05.03.12 TESTING

- A. The Contractor shall provide all test equipment and personnel and conduct applicable tests according to the current adopted version of the ANSI/NETA

Maintenance Testing Specifications standard and submit written copies of all test results.

- B.** Test all 600-Volt wiring to verify that no short circuits or accidental grounds exist. Perform 25 insulation resistance tests on all wiring No. 6 AWG and larger using an instrument which applies a voltage of approximately 500 Volts to provide a direct reading of resistance; minimum resistance shall be 250,000 Ohms.
- C.** Test the grounding system to assure continuity and that the resistance to ground is not excessive.
- D.** Tests as required for all component parts of the complete installation shall be performed by the contractor to demonstrate the satisfactory functioning of all electrically operated equipment and wiring and the adequacy of the entire electrical system.
- E.** Any equipment or materials furnished and/or installed under this contract which fails under tests shall be repaired or replaced and then retested until satisfactory results are obtained, entirely at the expense of the contractor. He shall assume full responsibility for the proper functioning and quality of all electrical installations to the extent that any breakdowns, deficiencies or deteriorations caused by poor workmanship, inferior equipment furnished by the contractor, materials or method of installation shall be promptly remedied, replaced or repaired by the contractor.

THE FOLLOWING SECTION IS ADDED:

LABEL

701.06.01 - GENERAL

701.06.01.01 DESCRIPTION OF WORK

- A.** Provide identification as specified herein for all indicated items.
- B.** Work Included:
 - 1.** Nameplates to identify circuit breakers, pull boxes, junction boxes.
 - 2.** Wire tags at each end of all feeders and in all junction and pull boxes.
 - 3.** Labels for exposed conduits, conduits containing feeders, fire alarm and communications shall be provided identifying source and end point. Conduits shall be labeled at source, every 30ft and at end point.
 - 4.** "DANGER-HIGH-VOLTAGE" signs shall be securely mounted on the entry doors of all electrical rooms.

5. "WARNING" signs shall be securely mounted beneath beacon lights, verbiage and location as shown on plans.
6. Labels required by the National Electrical Code.

701.06.01.02 SUBMITTALS

- A. In accordance with the General and Special Conditions, the Contractor shall submit:
 1. Descriptive literature for materials specified.

701.06.02 – PRODUCTS

701.06.02.01 MATERIALS:

- A. Nameplates:
 1. Nameplates shall be white core, black laminated plastic having engraved letters.
 2. Letter size and nomenclature shall be as directed by the Owner.
- B. Labels:
 1. Labels on feeder conduits shall consist of 3/4-inch black letters on a white background. Painted Stencil or printed nylon cloth backed adhesive labels are acceptable. Nomenclature shall be as directed by the Owner.
 2. Labels on fire alarm conduits shall consist of "FA" stenciled in red letters on a white painted rectangular background. Adhesive nylon cloth backed printed labels of the proper color are acceptable.
 3. Labels on communication conduits shall be 2 blue bands, each 1-inch wide with 1 inch between them.
- C. Wire tags shall be of printed adhesive backed nylon cloth material with printed identifying numbers and letters. Nomenclature shall be as directed by the Owner.
- D. Provide manufacturer's standard "DANGER" signs of baked enamel finish on 20 gage steel; of standard red, black and white graphics; 14 inches by 10 inches size except where 10 inches by 7 inches is the largest size which can be applied where needed, and except where larger size is needed for adequate vision.
- E. Provide manufacturer's standard "WARNING" signs of aluminum; of standard red, black and white graphics; signs are to be 5 inches by 7 inches in size.

701.06.03 – EXECUTION

701.06.03.01 PREPARATION

- A.** All surfaces to receive labels shall be carefully prepared in accordance with the manufacturer's instructions.

701.06.03.02 APPLICATION:

- A.** Labels:
 - 1. Labels shall be painted and stenciled on clean dry surfaces.
 - 2. All conduit systems shall require identification when exposed or concealed above accessible ceilings.
- B.** Nameplates:
 - 1. Nameplates shall be secured to painted surface with suitable oval head stainless steel screws.
 - 2. Nameplates shall be secured to unpainted surfaces with epoxy cement. Surface shall be properly cleaned before application.
- C.** Danger Signs:
 - 1. Danger signs shall be secured with oval head stainless steel screws.
- D.** Warning Signs:
 - 1. Warning signs shall be secured with oval head stainless steel screws.

THE FOLLOWING SECTION IS ADDED:

CODES AND FEES

701.07.01 – GENERAL

701.07.01.01 APPLICABLE CODES AND REQUIREMENTS

- A.** Conformance:
 - 1. All work, equipment and materials furnished shall conform with the existing rules, requirements and specifications of the Insurance Rating Organization having jurisdiction, the current version of National Electrical Code(NEC) adopted by the NJ DCA, the National Electric Manufacturers Association(NEMA), the Institute of Electrical Engineers(IEEE), the Insulated Cable Engineers Association (ICEA), the American Society of Testing Materials(ASTM), the American National Standards Institute(ANSI), the Illuminating Engineering Society(IES), the requirements of the Occupational Safety Hazards Act(OSHA) and all other applicable Federal, State and local laws and/or ordinances.

- B.** All material and equipment shall bear the UL inspection labels if the material and equipment is of the class inspected by said laboratories.
- C.** Non-Conformance:
 - 1.** Any paragraph of requirements in these Specifications, or Drawings, deviating from the rules, requirements and specifications of the above organizations shall be invalid and their requirements shall hold precedent thereto. The CONTRACTOR shall be held responsible for adherence to all rules, requirements and specifications as set forth above. Any additional work or material necessary for adherence will not be allowed as an extra, but shall be included in the bid price. Ignorance of any rule, requirement or specification shall not be allowed as an excuse for nonconformity. Acceptance by the ENGINEER does not relieve the CONTRACTOR from the expense involved for the correction of any errors which may exist in the Drawings submitted or in the satisfactory operation of any equipment.
- D.** Certification:
 - 1.** Upon completion of the work, the CONTRACTOR shall obtain certificates of inspection and approval from the National Board of Fire Underwriters or similar inspection origination having jurisdiction and shall deliver same to the Owner's representative.

701.07.01.02 FEES

- A.** The cost of procuring all permits, inspection services, and fees for temporary electric services shall be included in the bid price.

THE FOLLOWING SECTION IS ADDED:

SECTION 705 – FARM ROAD PARK LIGHTING

705.01 DESCRIPTION

705.01.01 Preface

WORK INCLUDED UNDER THIS CONTRACT INCLUDES THE INSTALLATION OF THE LIGHT POLES, FIXTURES, FOUNDATIONS, CONDUIT, WIRING, CONTACTOR PANEL AND ANY OTHER NECESSARY ELECTRICAL COMPONENTS (AS SHOWN ON THE PLANS OR AS DESCRIBED HEREIN) INCLUDING CONNECTING THE PROPOSED ELECTRICAL EQUIPMENT TO THE NEW ELECTRICAL SERVICE.

PROPOSED LIGHT POLES, POLE FOUNDATIONS, LED FIXTURES, AND POLETOP LUMINAIRE ASSEMBLIES SHALL BE FURNISHED AND PROVIDED BY THE CONTRACTOR.

ALL OTHER MATERIALS (THAT ARE NOT EXPLICITLY SPECIFIED TO BE PROVIDED BY THE OWNER) REQUIRED TO INSTALL A FULLY OPERATIONAL LIGHTING SYSTEM SHALL BE FURNISHED BY THE CONTRACTOR.

705.01.02 General

All work performed under this contract shall be performed in accordance with all provisions of these specifications and drawings. Any deviations from the specification must be approved in writing by the Owner or Engineer.

All work shall comply with the applicable rules of the National Electrical Code, the National Electrical Safety Code, the National Fire Codes, (published by the National Fire Protection Association), state and local codes and ordinances, and the terms and conditions of the services of the electrical utility company, as well as any other authorities that may have lawful jurisdiction pertaining to the work specified. None of the terms or provisions of this specification shall be construed as waiving any of the rules, regulations or requirements of these authorities. The Contractor shall procure all necessary permits or licenses to carry out his work, and shall pay the lawful fee therefore, as well as for any inspection fee or the cost of a certificate of approval. In any instance where these specifications call for materials for construction of a better quality or larger size than required by the codes, the provisions of these specifications shall take precedence. The codes shall govern in the case of direct conflict between the codes and the plans and the specifications.

705.01.03 Electrical System Requirements

A. **Contractor Responsibility:** The Contractor shall be responsible for the installation of a complete and operational parking lot lighting system. The Contractor shall furnish and install all items of the electrical system as outlined on the Construction Drawings, including but not limited to junction boxes, electrical enclosures, additional conduit, wiring, etc. The Contractor shall review existing electrical services and coordinate any required modifications with the Owner's representative before any equipment is installed. The contractor shall furnish and supply all lighting poles, fixtures, foundations, luminaire assemblies and astronomical time clock.

B. Design Standards

1. All circuits shall be designed so that the voltage at the safety disconnect in the electrical enclosure near the base of each pole is within 3% of nominal.
2. All work shall meet local and National Electrical Codes. It shall be the Contractors' responsibility to correct any work deemed unacceptable by local electrical inspectors.
3. All electrical components shall be UL Listed for the appropriate application.

C. Control and Monitoring

1. Contractor shall install astronomical time clock which will control the new park lights as part of the electrical service. Contractor will be responsible for all wiring.
2. In the event that light performance criteria is not achieved during the light testing, Contractor and/or manufacturer shall be responsible for correcting any errors.

705.02 MATERIALS

705.02.01 General

All materials supplied by the Contractor under the provisions of these specifications and plans shall be new materials of the kind and character called for by the specifications. Defective equipment or material damaged in the course of installation or tests shall be replaced or repaired in a manner satisfactory to the Owner. All materials and equipment to be furnished under these specifications shall be the standard product of a manufacturer regularly engaged in the production of such material and shall be the manufacturer's current standard design.

705.02.02 Electrical

- A. Electric Power Requirements for the Parking Lot and Access Road Lighting Equipment is shown on the Contract Plans. Power supply will be furnished and installed on-site by contractor. Contractor shall hook up lighting system to new power source.

705.02.03 Additional Electrical Materials

Refer to Section 918 of these specifications for additional electrical materials used on this project.

705.03 EXECUTION

705.03.01 Site Access

- A. **Initial Site Inspection:** The Contractor shall be presumed to have made a reasonable inspection of the premises prior to the time of bidding and shall be held responsible for all information available through such inspection. The Contractor shall immediately upon discovery, bring to the attention of the Owner or Engineer any conflicts that may occur among the various provisions of the specifications and plans. The Owner shall resolve such conflicts and shall be responsible for any costs reasonably incurred by the Contractor due to such conflict. Failure of the Contractor to bring conflicts or exceptions to the attention of the Owner shall allow the Owner to require any change deemed necessary before acceptance by the Owner.
- B. **Contractor Access:** For the performance of the Contract, the Contractor will be permitted to occupy such portions of the site as shown on the Construction Drawings, or as permitted by the Owner. A reasonable amount of tools, materials or equipment for construction purposes may be stored in such place, but not more than is necessary to avoid delays in construction. Excavated and waste materials shall be piled or stocked in such a way as to not interfere with spaces that may be designated to be left free and unobstructed.
- C. **Owner's Access:** The Engineer shall have access to the work site. The Contractor shall keep the Owner advised of the progress of the project and shall provide opportunity for the Engineer to inspect each phase of the project. The Contractor shall provide proper and safe facilities for such access and for inspection.

705.04 CONSTRUCTION

- A. **Manufacturer's Instructions:** Written instructions for the installation of the lighting equipment shall be provided by the manufacturer. The Contractor shall review the instructions prior to beginning installation and review any areas of concern with the manufacturer.
- B. **Installation of Equipment:** Contractor shall install all lighting equipment per manufacturer's stated requirements to ensure lighting performance is achieved. Wiring runs shall be as indicated on the Construction Drawings.
- C. **Manufacturer Representative:** A qualified representative from the lighting manufacturer shall be available to provide installation guidance if required by the Contractor.
- D. **Handling of Equipment:** The lighting equipment shall be handled in an appropriate manner to ensure safe installation and prevent damage to the equipment. Repair or replacement of damaged component shall be the responsibility of Contractor.
- E. **Rigging:** Use the appropriate rated web fabric slings to lift components into position. Chains or cables shall not be allowed due to potential failure and damage to components.

- F. Clean-up:** Upon completion of the work and before acceptance and final payment is made, the Contractor shall clean and remove from the site of the work, surplus and discarded materials, temporary structures and debris of every kind. The Contractor shall leave the site of work in a neat and orderly condition equal to that which originally existed. Surplus and waste materials removed from the site of the work shall be disposed of at locations satisfactory to the Owner.
- G. Replacement of Damaged Property:** The Contractor shall replace all property damaged including fences, trees, plants, grass, walks, drives, building surfaces, etc.
- H. Additional Work:** In addition to the work required for the installation of the parking lot lighting, the Contractor shall install all ancillary work, as shown on the Construction drawings.

705.05 MEASUREMENT AND PAYMENT

<i>Item</i>	<i>Pay Unit</i>
PARK LIGHTING INSTALLATION	LUMP SUM

The lump sum price bid for PARK LIGHTING INSTALLATION shall include the installation of all new lighting equipment as specified and described herein and as shown on the Contract Drawings, including concrete foundations, as well as the furnishing and installation of all required ancillary electrical components. The costs associated with connection to the electrical service, any additional work as described herein and in the construction drawings, and all labor will be also included in the lump sum price bid. Excavation, pavement and lawn restoration from construction, and all other miscellaneous items required for a full installation shall also be paid for under the lump sum price bid.

DIVISION 800 – LANDSCAPING

SECTION 804 – TOPSOILING

THE ENTIRE SECTION IS CHANGED TO:

804.01 DESCRIPTION

This Section includes providing all labor, materials, tools and equipment necessary for furnishing and placing topsoil as indicated on the contract drawings.

804.02 MATERIALS

THE ENTIRE SUB-SECTION IS CHANGED TO:

Provide materials as specified:

Screened Topsoil

A. Topsoil furnished by the CONTRACTOR shall consist of a natural friable surface soil without admixtures of undesirable subsoil, refuse, or foreign materials. It shall be reasonably free from roots, hard clay, coarse gravel, stones larger than one inch in any dimension, noxious weeds, tall grass, brush, sticks, stubble or other material which would be detrimental to the proper development of vegetative growth. Topsoil shall be obtained from naturally well drained sites where topsoil occurs at least 5- inches deep. Topsoil shall not be obtained from bogs or marshes.

B. Topsoil shall conform to the following grading:

Sieve Sizes Percentage Passing	
1/2 inch	100%
No.4	75% -100%
No.10	60% -100%
No.200	20% -60%

C. Topsoil shall contain not less than 3%, or more that 20% organic matter, by weight as determined by loss-on-ignition of oven-dried samples in accordance with ATM T-6. Organic material shall be decomposed and free of wood.

D. The RE shall be notified on the location from which the Contractor proposes to furnish topsoil at least 30 calendar days prior to delivery of topsoil to the Project from that location. The topsoil and its source may be inspected and tested by the RE before approval will be granted for its use.

E. Topsoil sources lacking organic matter may be used if, prior to delivery to the Project, sufficient organic matter in the form of pulverized peat moss or rich organic soil from

other sources is thoroughly mixed with the topsoil to provide a product meeting the above requirements.

F. Organic material for incorporation into topsoil, if required, shall be partially decomposed fibrous or cellular stems and leaves of any of several species of Sphagnum mosses, or rotted manure. Organic material may require chopping to shredding to insure thorough mixing with the topsoil.

G. All topsoil shall be fertilized as follows: the application rates of the fertilizer and limestone per 1,000 square feet of ground area of topsoil furnished by the CONTRACTOR shall be determined by the ENGINEER, based on soil analysis tests so that the total natural and applied chemical constituents are as follows:

Nitrogen	1.0 lb. minimum - 1.5 lb. maximum per 1,000 square feet
Phosphoric Acid	1.0 lb. minimum - 2.0 lb. maximum per 1,000 square feet
Potassium	1.0 lb. minimum - 2.0 lb. maximum per 1,000 square feet
Limestone	Limestone requirements shall conform to the following table:

LIMESTONE REQUIREMENTS

Soil pH	Limestone Tons per Acre
Above 6.0	0
5.0 - 6.0	1.5
Below 5.0	3.0

804.03 CONSTRUCTION

THE ENTIRE SUB-SECTION IS CHANGED TO:

All areas that are disturbed during construction which are not covered with pavement, concrete, crushed stone, or mulch shall be graded to a neat, uniform grade line and appearance, as determined by the ENGINEER, and covered with a uniform, five inch minimum thickness of topsoil, unless otherwise shown on the Drawings, or directed by the ENGINEER.

The topsoil shall be evenly spread on the designated areas to a depth, which, after settlement and compaction, shall be four inches, unless otherwise directed by the ENGINEER. Spreading shall not be done when the ground or topsoil is frozen, excessively wet, or otherwise in a condition detrimental to the work, as determined by the ENGINEER.

After spreading has been completed, large clods, stones larger than one half-inch in any dimension, roots stumps, and other litter shall be raked up and removed.

The final grading of the topsoil prior to fertilizing and seeding shall be to a tolerance that will not permit ponding of water in excess of one inch in depth.

804.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
SCREENED TOPSOIL, 5" THICK	SQUARE YARD

SECTION 806 – FERTILIZING AND SEEDING

806.03.01 TURF SEEDING

The contractor is responsible for seeding utilizing a riparian seed mix (ERNMX-178) and fertilizing the area under this item. Seed mixture (ERNMX-178 or approved equal) shall be evenly spread using hand operated, hand held, or broadcast spreader. Seeded areas should be lightly raked to mix the seed into the soil. Contractor should protect and maintain seeded areas to allow for proper establishment. If the seed mix is not properly established in a reasonable amount of time, contractor shall reseed the area as needed.

806.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
FERTILIZING AND SEEDING	SQUARE YARD

SECTION 811 – PLANTING

811.01 DESCRIPTION

THIS ENTIRE SUB-SECTION IS CHANGED TO:

This Section describes the requirements for furnishing, delivering, installing, watering, and protection of plantings. All plantings will be done in accordance with the contract drawings.

811.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
PLANTINGS	LUMP SUM

DIVISION 900 – MATERIALS

SECTION 902 - ASPHALT

902.02.03 MIX DESIGN

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

Unless otherwise approved by the engineer, only one source of supply for hot mix asphalt surface course may be used on the project.

902.02.04 SAMPLING AND TESTING

DETERMINATION OF CONFORMANCE TO THE VOLUMETRIC PROPERTIES BY SAMPLING AND TESTING AT THE HMA PLANT BY AN INDEPENDENT TESTING AGENCY AND/OR LABORATORY IS PREFERRED; HOWEVER, THE FOLLOWING CHANGES TO SUBSECTION 902.02.04 MAY BE USED AS AN ALTERNATE TO THE SAMPLING AND TESTING PROVISIONS LISTED IN SUBSECTION 902.02.04 TO DETERMINE CONFORMANCE TO THE SPECIFICATION REQUIREMENTS.

- F. Acceptance of HMA.** The Department may accept the HMA as specified in 902.02.04.A through 902-02.04.D by employing staff or an independent testing agency at the HMA plant during production. The inspector who performs the quality assurance sampling shall be certified by the Society of Asphalt Technologists of New Jersey as an Asphalt Plant Technologist, Level 2.

Alternatively, the Department may accept the HMA by Certification of Compliance according to 106.07.

SECTION 903 – CONCRETE

903.02.02 CHEMICAL ADMIXTURES

THE FOLLOWING IS ADDED TO THIS SUBSECTION:

Corrosion inhibitor products that are to be used in the fabrication of concrete Items will be as follows:

Calcium Nitrite Based as produced by
W.R. Grace & Company
2133 85th Street
North Bergen, NJ 07047
Telephone: 201-869-5220

Calcium Nitrite Based as produced by
The Euclid Chemical Company
5 Joanna Court
East Brunswick, NJ 08816
Telephone: 732-390-9770

Calcium Nitrite Based as produced by
Master Builders Inc.
798 Welsh Road
Huntingdon Valley, PA 19006
Telephone: 215-938-7501

Calcium Nitrite Based as produced by
SIKA Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
Telephone: 800 - 933 - SIKA (7452)

Calcium Nitrite Based as produced by
Great Eastern Technologies, LLC
"Chem Strong CI"
515 Route 528
P. O. Box 3015
Lakewood, NJ 08701
Telephone: 888 - 452 – 9348

SECTION 912 – PAINTS, COATINGS, TRAFFIC STRIPES AND TRAFFIC MARKINGS

912.03.02 Thermoplastic Traffic Markings

THE SUBPART HEADING IS CHANGED TO:

912.03.02 Traffic Markings

THE FIRST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

For traffic markings, use either preformed or hot extruded thermoplastic conforming to AASHTO M 249, except that for preformed thermoplastic, the minimum thickness requirement is 90 mils.

918.02 CABLE AND WIRE

THE FOLLOWING SECTION IS ADDED:

CABLE AND WIRE

918.02.01 - GENERAL

918.02.01.01 WORK INCLUDED

- A.** Under this Section, the CONTRACTOR shall furnish and install all wires and cables for power and Local Area Networking (LAN) as required to complete the electrical installation.
- B.** Each coil or reel of insulated wire and cable furnished shall bear a tag, containing the UL approval stamp (providing cable is of the class inspected by the said laboratory), name of manufacturer, trade designation, month and year of manufacturer; and in no case shall be more than six months old unless accepted by the ENGINEER. Cable "mil ends" shall be unacceptable for use on this project. Wire and cable shall not have been stored in the weather outdoors.
- C.** Conductors larger than No. 10 AWG shall be stranded and all conductors shall be copper, unless otherwise specified.
- D.** The following information for each size of wire and cable shall be submitted to the ENGINEER for acceptance:
 - 1.** Voltage rating
 - 2.** Name of cable manufacturer
 - 3.** Minimum insulation resistance in megohms, per 1,000 ft at 15.5° C
 - 4.** Number and size of strands in each conductor

5. Conductor insulation in mils
 6. Sheath thickness in mils
 7. Average OD of bare conductor
 8. Average overall diameter of finished cable
 9. Weight per 1,000 ft of finished cable
 10. Application or intended use
 11. Conductor type
- E. Cable shall be shop tested in accordance with the latest standards and applicable test procedures of the ICEA and certified data shall be submitted in compliance with this requirement. Sample lengths of cable shall be submitted to the ENGINEER.
- F. Each wire and cable shall be individually identified and tagged with a unique number using wire markers at each termination, splice point, and where passing through junction boxes or pull boxes (even when not spliced).

918.02.02 – PRODUCTS

918.02.02.01 600 VOLT AND BELOW POWER CABLES

- A. Single Conductor Cable. These cables shall be composed of stranded tinned copper conductors insulated with a heat, flame, and moisture resistant thermoplastic compound. Cables shall be rated not less than 600 volt, and shall be for circuits operating in dry and wet locations at a maximum conductor temperature of 90° C. Cables shall be UL listed as type XHHW-2.
- B. The conductors shall be stranded annealed copper, the individual strands of which shall, before stranding, be in accordance with ASTM: B 3.
- C. The stranded conductors shall conform to ASTM: B 8, Class B.
- D. The conductors shall be insulated with a properly vulcanized flame-retardant, insulating compound.
- E. Conductor insulation or phase-coded tapes shall be color-coded as follows:
AC Power 460 Volt and Above
Phase A - YELLOW
Phase B - BROWN
Phase C - ORANGE
Neutral - GREY

208/120 Volt System
Phase A - BLACK
Phase B - RED
Phase C - BLUE
Neutral - WHITE

DC Power

Positive Lead - RED

Negative Lead - BLACK

DC Control - BLUE

120 Volt Control Wiring

Single conductor ac control wire shall be RED except a wire entering a Motor Control Center compartment or control panel which is an interlock, shall be color-coded YELLOW.

24 Volt Control Wiring - ORANGE

Equipment Ground – GREEN

- G.** Single conductor ac control wires shall be multicolored whenever group is installed in same conduit or terminated in same panelboard, cabinet, junction box, etc.

918.02.02.02 INSTRUMENT CABLES

- A.** Instrumentation cables carrying analog signals shall be single or multipair twisted, shielded tinned copper conductors. In multipair cables, each pair shall be individually twisted, shielded conductors with an overall protective jacket.
- B.** Minimum size No. 16 AWG with seven or more concentric strands for single pair and single triad cables and No. 18 AWG with 7 or more concentric strands for multipair and multi-triad cables shall be provided. Each pair shall have a mylar/aluminum, 100 percent coverage tape shield with a drain wire, not more than two sizes smaller than the conductor size. Conductors shall be polyethylene or polypropylene insulated for minimum 300 volt and shall be covered with chrome vinyl or PVC jacket. The conductor shall have 600 volt insulation where physical limitations require analog signal wires to run in the same enclosure with wires requiring 600 volt insulation, for a run not to exceed five ft.
- C.** The CONTRACTOR shall install all cable or conductors used for instrumentation wiring in a grounded metal raceway. Analog signal wires shall exclusively occupy these conduits.
- D.** All shielding shall be continuous and shall be grounded in accordance with the instrumentation equipment manufacturer's recommendations, as approved.
- E.** Raceway containing instrumentation cable shall be installed to provide the following clearances:

1. Raceway installed parallel to raceway conductors energized at 480, 240/120 or 208/120 volts: two feet
 2. Raceway installed at right angles to conductors energized at 480, 240/120 or 208/120 volts: six inches
- F. Where practicable, raceway containing instrumentation cable shall cross raceway containing conductors of other systems at right angles.
- G. Where instrumentation cables are installed in panels, etc., the CONTRACTOR shall arrange wiring to provide maximum clearance between cables and other conductors. Instrumentation cables shall not be installed in same bundle with conductors of other circuits.
- H. Grounding of cable shield shall be accomplished at one point only, unless otherwise required by instrumentation systems manufacturer.
- I. Extra pullboxes shall be installed, for ease of cable pulling and the cable manufacturer's recommended conduit fill factor shall be followed. Cables shall be moisture sealed at all connections.
- J. Special instrument cable shall be as specified or recommended by the vendor of the equipment or instruments requiring such wiring, but shall not be sized less than the minimum wire size requirements of #16AWG, #18AWG for single and multipair cables respectively.
- K. All cable, insulation and jacket shall have adequate strength to allow for it to be pulled through the conduit systems. Sufficient conductors shall be installed to provide space and serve future equipment where shown and specified.
- L. All conductors shall be color-coded and all wires shall be suitably tagged with permanent markers at each end, at each JBX,PBX termination location. Each conductor shall be identified with a unique number corresponding to approved shop drawings.

918.02.03 - EXECUTION

918.02.03.01 600 VOLT AND BELOW POWER CABLES

- A. Cable Ampere Rating: The sizes of wire and cable for individual circuits shall be shown on drawings or as acceptable to the ENGINEER as being proper for the service requirements. Wires for branch circuits shall not be smaller than No # 12 AWG. Wires of greater size, as indicated or required, shall be used to minimize voltage drops for circuit runs over 100ft or where voltage drop exceeds 5%.
- B. Wire Terminals: Wires on manufactured assemblies such as distribution board, motor control centers and individual motor control equipment shall be

terminated with cup terminals, pronged washers, compression type or pressure type terminals furnished on devices. Set-screw type pressure connectors shall be provided with saddles.

- C.** Wires and cable terminations utilizing compression connectors shall be made with a pressure tool per the manufacturer's instructions. For wires 250 MCM and larger, the lugs shall have long barrels to allow double indentations.
- D.** All 600 volt cables shall have the minimum possible number of splices and splices shall only be made in junction boxes. All wire splices shall be identified using wire markers.
- E.** The finished splice shall be made waterproof via the application of an epoxy coating manufactured for the purpose.
- F.** Sealing of Conduits. Where cables enter pullboxes, switchgear enclosures or incoming line sections from the underground system, conduit ends shall be sealed with oakum packing and plastic, rat repellent sealing compound in addition to the OZ Type "CSBG" fittings and all spare conduits shall be capped. Unused conduit and duct entrances shall be closed off by spring clip attached, galvanized, sheet steel covers.
- G.** Sealing of Conduits: Where cables enter pullboxes, junction boxes, HVAC enclosures or incoming feeders from the underground system, conduit ends shall be sealed with OZ Type "CSBG" fittings and all spare conduits shall be capped with cast screw covers and made waterproof.
- H.** Phasing/Rotation. All wiring to motors, automatic transfer switch, motor control centers, panelboards, etc. shall be phase coordinated with existing power where applicable and coordinated with rotational requirements of equipment. Where phasing or rotation is incorrect, contractor shall change connections to obtain proper results and retape termination at no additional cost to owner.
- I.** Cables and wires shall be installed continuous from power source or pickup point to load or destination without unnecessary splices. Pullboxes shall be installed judiciously, as required by code, or to avoid tension due to the length of pull.

918.02.03.02 INSTRUMENTATION CABLE

- A.** Instrumentation cables shall be moisture sealed, using shrink-on socks at all connections.

918.02.03.03 PULLING TEMPERATURE

- A.** Cable shall not be flexed or pulled when the temperature of the insulation or of the jacket is such that damage will occur due to low temperature

embrittlement. When cable will be pulled with an ambient temperature within a three day period prior to pulling is 40 deg F or lower, cable reels shall be stored during the three day period prior to pulling in a protected storage with an ambient temperature not lower than 55 deg F and pulling shall be completed during the work day for which the cable is removed from the protected storage.

- B. All feeder and underground conduits shall be swabbed with a brush, followed by clean rags, then a mandrel (85% of conduit diameter), before pulling cables through. A lubricating compound shall be applied to the cables to reduce friction and damage to the cables during the pulling operation.

918.02.03.04 TESTING

- A. Testing. All wiring shall be continuity tested, meggered, to ensure the integrity of the insulation. A type written report shall be submitted to the Engineer containing all the test results. All wire/cable failing test or judged by the engineer as being deficient, shall be replaced.
- B. Perform resistance measurements through bolted connections with a low-resistance ohmmeter in accordance with Section 7.3.2.A.2.1.
- C. Perform an insulation-resistance test on each conductor with respect to ground and adjacent conductors. The applied potential shall be 500 volts dc for 300-volt rated cable and 1000 volts dc for greater than 300-volt rated cable. The test duration shall be one minute.
- D. Verify uniform resistance of parallel conductors.

918.03 BONDING AND GROUNDING MATERIALS

THE FOLLOWING SECTION IS ADDED:

GROUNDING

918.03.01 - GENERAL

918.03.01.01 WORK INCLUDED

- A. The CONTRACTOR shall furnish and install the grounding systems complete in accordance with the minimum requirements established in the NEC and as shown, specified or required.
- B. In addition to the NEC requirements, the following shall be permanently and effectively grounded:
 - 1. All pullboxes;

2. All junction boxes;
3. All conduit supports;
4. Panelboards;
5. Engine generator and frame;
6. Control panels; and
7. Motor Control Center.

918.03.02 – PRODUCTS

918.03.02.01 GROUND CABLE

- A. The ground cable, where required, shall consist of bare medium hard drawn 97.5 percent minimum conductivity stranded copper cable.
- B. A Ground electrode shall consisting of 5/8 in. dia copper-clad steel rods is required for the generator enclosure.
- C. All ground cable taps and ground electrode taps shall be of the crucible weld copper thermite process as manufactured by Erico Products Incorporated; Burndy Co.; or equal.

918.03.02.02 FITTINGS

- A. Grounding connections to equipment shall be bolted. Cable end connections may be made by use of the crucible weld process or bolted type connector. Bolted type connectors for this application shall consist of corrosion resistant copper alloy with silicone bronze bolts, nuts and lock washers which are designed for this purpose.
- B. Grounding connection below grade shall be made by the crucible weld copper thermite process.

918.03.02.03 General Requirements – High-Frequency Bonding:

- A. All motors operated on variable frequency drives shall be bonded from the motor foot to system ground with a high frequency ground strap made of flat braided, tinned copper with terminations to accommodate motor foot and system ground connection.
- B. Proper grounding of motor frame for all inverter-driven induction motors
 1. References: ABB Technical Guide No.5 Allen Bradley Publication 1770-4.1 Application Data, Industrial Automation Wiring and Grounding Guidelines.

918.03.03 – EXECUTION

918.03.03.01 RACEWAYS

- A.** Conduit which enters equipment such as pullboxes, junction boxes, control panels, panelboards, motor control centers and similar equipment shall be bonded to the ground bus, where provided, and as otherwise required by the NEC.
- B.** Where raceways are not mechanically and electrically connected together, bare stranded copper bonding jumper cables shall be installed connected to the separate raceway ends utilizing insulated grounding type bushings.

918.03.03.02 PREPARATION AND INSTALLATION

- A.** Surfaces where grounding connections are to be made shall be clean and dry. Steel surfaces shall be ground or filed to remove all scale, rust, grease and dirt. Copper and galvanized steel shall be cleaned with Emery cloth to remove oxide before making connections.

918.10 Panel Boards and Circuit Breakers

REPLACE THIS SECTION WITH THE FOLLOWING:

PANELBOARDS

918.10.01 - GENERAL

918.10.01.01 WORK INCLUDED

- A.** The CONTRACTOR shall furnish and install panelboards of voltage and current ratings as shown. Panelboards shall be furnished with circuit breaker ratings, number of breakers, number of poles and locations conforming with the panelboard schedules on the Contract Drawings.

918.10.02 - PRODUCTS

918.10.02.01 ENCLOSURES

- A.** Panelboards shall be furnished and installed in surface mounting NEMA 1 type enclosures where installed indoors, or NEMA 3R where install is outdoors.
- B.** The CONTRACTOR shall equip doors with concealed or semi-concealed hinges and with flush or semi-flush spring catch type flush cylinder locks. Cabinet doors of similar use shall be keyed alike and two keys provided with each lock. The CONTRACTOR shall set cabinet doors flush into cabinet trim.

The CONTRACTOR shall equip trim with adjustable clamps or other approved means to fasten trim to cabinets. Fastening method shall permit adjustment for aligning the trim of flush cabinets to a plumb position. Trim for surface cabinets shall be even with the perimeter of the back box.

- C. The CONTRACTOR shall equip each panel with a nameplate with 3/16 in. high white letters engraved in laminated black micarta. Nameplate shall include panels' identification and voltage ratings.
- D. The CONTRACTOR shall include manufacturer's nameplate and UL inspection label on interior of cabinet. For branch circuit panel, each circuit protective device shall be identified by permanent number referenced to circuit directory on interior of cabinet door.

918.10.02.02 BUSWORK

- A. Main bus bars shall be copper and of ample size so that a current density of not more than 1,000 amp per sq in. of cross-section will be attained. This current density shall be based on the application of the full load connected to the panel plus approximately 25 percent of the full load for spare capacity. The main bus shall be full capacity as based on the preceding for the entire length of the panel so as to provide full flexibility of circuit arrangement.
- B. Solid neutral bus bars, where required, shall be of copper. Ratings shall be in accordance with applicable standards. Panels used as subpanels shall be equipped with an isolated neutral bus.
- C. All panels shall contain a ground bus kit for terminating equipment ground conductors. The neutral bus, ground bus, and panel enclosure shall be bonded together where appropriate in accordance with the N.E. code.
- D. Branch buswork shall be of copper and of rating to match the maximum branch circuit breaker which may be installed in the standard space. All blank spaces shall contain the internal mounting hardware for future insertion of circuit breakers.

918.10.02.03 CIRCUIT BREAKERS

- A. All circuit breaker contacts shall be on non-welding noncorrodible silver alloy, housed in arc chambers, equipped with arc quencher plates. Contacts shall be quick make and quick break whether activated automatically or manually.
- B. Circuit breakers shall have inverse time tripping characteristics with automatic release secured through action of a combination thermal magnetic trip element which shall be trip free of the handle and shall operate in response to an overload, but shall trip on sustained overload. On dangerous overload or

short circuit, within the interrupting rating of the breaker, the magnetic trip shall instantly trip the circuit breaker without damage or injury to the circuit breaker.

- C. Minimum branch circuit breaker size shall be 20 amp frame except where otherwise shown or where a larger frame size is standard for the continuous current rating required. All circuit breakers shall be of the bolted type. Circuit breakers used for lighting circuit switching shall be approved for the purpose and shall be marked "SWD."
- D. The entire circuit breaker shall be enclosed in a molded bakelite case and shall be sealed to prevent tampering or unauthorized changes in calibration.
- E. Circuit breaker handles shall have three distinct positions "Off" - "On" - and "Tripped". When a circuit breaker opens on overload or short circuit, the operating handle shall automatically assume the "Tripped" position.
- F. Circuit breakers for receptacle circuits located outdoors or in damp areas shall be equipped with integrally mounted ground fault interrupters complete with "TEST" pushbutton and shall be of a type which fit standard panelboard spaces for the breaker continuous current rating required. Interrupting ratings shall be as indicated on the drawings
- G. Full size breakers shall only be permitted to be installed in panelboards, "twin" or "piggy back" breakers can only be used in special cases with approval of the engineer.

918.10.02.04 ATTIC STOCK

- A. The contractor shall provide a minimum of 2 spare parts such as switches, receptacles, breakers under 100A and fuses as shown on contract drawing. If fuses are on a 3-phase circuit, a minimum of 6 spares must be supplied. All spare parts must be equivalent to the specified parts.

918.10.03 - EXECUTION

918.10.03.01 MOUNTING

- A. Panelboards shall be set true and plumb in locations as shown. Top of panelboard enclosures shall not exceed six feet above finished floor elevation.
- B. Enclosures shall not be fastened to concrete or masonry surfaces with wooden plugs. Appropriate cadmium plated or galvanized steel bolts shall be used with expansion shields or other metallic type concrete insert for mounting on concrete or solid masonry walls. Cadmium plated or galvanized

steel toggle bolts shall be used for mounting on concrete block or other hollow masonry walls. Bolt diameter shall be as required considering the size and weight of the completed panelboard and enclosure to provide adequate structural support.

- C. Enclosures shall be installed with 1/2" air space behind unit to preclude water/moisture damage.
- D. The CONTRACTOR shall not use factory furnished knockouts with surface back boxes. The CONTRACTOR shall punch or drill required openings during installation. The CONTRACTOR shall equip cabinet doors exceeding 40 in. in height with vertical bolt three point locking mechanisms.
- E. The CONTRACTOR shall align the tops of cabinets in sight of each other at a uniform height. The CONTRACTOR shall install cabinets (and other enclosure products) in plumb with the building construction.

918.10.03.02 DIRECTORIES

- A. Directories shall be neatly marked, indicating function of circuit as installation progresses. After all work is installed and prior to acceptance by the OWNER, all directories shall be neatly typed and installed indicating circuit functions. Designations and circuit locations shall conform with the panelboard schedules on the Contract Drawings, except as otherwise authorized by the ENGINEER.
- B. The CONTRACTOR shall provide directories identifying panelboards and indicating size of feeder (cable and conduit) serving panel, circuit numbers and description of associated branch circuits including branch circuit trip and connected load at each circuit.

918.10.03.03 CONDUIT TERMINATIONS

- A. All conduits terminating on panelboards shall be identified with a unique identification number engraved on 1" diameter lamacoid tag.

918.11 Photoelectric Controls

REPLACE THIS SECTION WITH THE FOLLOWING:

TIME CLOCKS

918.11.01 – GENERAL

918.11.01.01 WORK INCLUDED

- A. Scope: Contractor shall furnish all labor, materials, equipment and incidentals required to provide switches for lighting and other systems as shown and specified.

918.11.01.02 QUALITY ASSURANCE

- A. Reference Standards: Comply with applicable provisions and recommendations of the following except where otherwise shown or specified.
 - 1. National Electrical Code.
 - 2. UL 20, Standard for General-use Snap Switches.

918.11.01.03 SUBMITTALS

- A. Shop Drawings: Submit for approval copies of manufacturer's technical information for switches proposed for use.

918.11.02 - PRODUCTS

918.11.02.01 TYPE

- A. The contractor shall provide an Astronomic 365-Day 1-Circuit Electronic Control, 120-277 VAC, 50/60 Hz, SPDT, Indoor Metal Enclosure, Ethernet Optional to control the light fixtures.
 - 1. Product and Manufacturer
 - a. Intermatic
 - b. Or approved equal
- B. Time Clock must meet the following requirements:
 - 1. Automatic input voltage selection from 120 to 277 VAC, 50/60 Hz
 - 2. Over 2,000 events plus holiday schedules
 - 3. Advanced scheduling including relative events, such as fourth Thursday of November or first week of year
 - 4. 30 A rated contacts
 - 5. 100-hour supercapacitor eliminates the need for batteries
 - 6. USB connection for uploading, downloading and transferring programs
 - 7. Easy-to-follow on-screen menus for programming to-the-minute accuracy
 - 8. Non-volatile memory protects programming indefinitely
 - 9. Firmware can be upgraded in-field via USB or Ethernet
 - 10. Internally expandable, in 4-circuit increments, up to 16-circuits for 4, 8, and 12-circuit models
 - 11. PC App for easy scheduling or control, either remotely or through USB flash drive
 - 12. Mobile app for real time status and overrides

918.11.03 – EXECUTION

918.11.03.01 GENERAL

- A.** Contractor shall furnish and install device as designated on construction drawing.
- B.** Install switches in conformance with National Electrical Code.

918.14 Lamps

REPLACE THIS SECTION WITH THE FOLLOWING:

LIGHT FIXTURES

918.14.01 – GENERAL

918.14.01.01 WORK INCLUDED

- A.** Scope: Contractor shall furnish all labor, materials, equipment and incidentals required to provide lighting fixtures as shown and specified.
- B.** Coordination: Coordinate location of fixtures with piping, ductwork, openings and other systems and equipment and locate clear of interferences.

918.14.01.02 QUALITY ASSURANCE

- A.** Reference Standards: Comply with applicable provisions and recommendations of the following except where otherwise shown or specified:
 - 1.** National Electrical Code.
 - 2.** UL 1598, Standard for Luminaires.

918.14.01.03 SUBMITTALS

- A.** Shop Drawings: Submit for approval copies of manufacturer's technical information for lighting fixtures.

918.14.02 - PRODUCTS

918.14.02.01 TYPE

- A.** Fixtures to be complete supports and incidentals as required.

918.14.02.02 HARDWARE

- A. All necessary hangers, supports, conduit adaptors, reducers, hooks, brackets and other hardware required for safe fixture mounting shall be furnished. Hardware shall be stainless steel.

918.14.02.03 SCHEDULE

- A. The lighting fixtures shall be provided in accordance with the light fixture schedule shown on the drawings:

918.14.03 – EXECUTION

918.14.03.01 GENERAL

- A. Fixture mounting heights and locations indicated on the Drawings are approximate and are subject to revision in the field where necessary to clear conflicts and obstructions.
- B. Install fixtures in conformance with the National Electrical Code.

918.14.03.02 SUSPENDED FIXTURES

- A. Pendant mount using 1/2-inch conduit stems. Ground to outlet box. Attach mounting to building structure with expansion anchors.

918.14.03.03 SURFACE MOUNTED FIXTURES

- A. Attach to appropriate outlet box.

918.14.03.04 BOXES AND FIXTURES

- A. For units mounted against masonry or concrete walls, provide suitable 1/2-inch spacers to prevent mounting back of box directly against wall.
- B. Bolt units rigidly to building with expansion anchors, toggle bolts, hangers or Unistrut.
- C. No boxes shall be installed with open conduit holes.
- D. Cable each circuit and identify with tag.

918.14.03.05 MOUNTING HEIGHTS

- A. Mounting heights or elevations are to bottom of the fixture or to centerline of device.

THE FOLLOWING SECTION IS ADDED:

918.15 SERVICE EQUIPMENT

918.15.01 – GENERAL

918.15.01.01 WORK INCLUDED

- A.** The CONTRACTOR shall furnish and install an enclosed utility service board complete with metering transformer compartment and main lug as shown, specified or required for the Farm Road Park.
- B.** The assembled service board shall be constructed per the requirements of PSE&G. They shall approve the layout prior to construction of the service board.

918.15.02 – PRODUCTS

918.15.02.01 MAIN BREAKER

- A.** The main circuit breakers shall be molded case circuit breakers which provide inverse time delay overload and instantaneous short circuit protection by means of a thermal magnetic element.
- B.** Each pole of these breakers shall provide inverse time delay and instantaneous circuit protection.
- C.** The breakers shall be operated by a toggle type handle and shall have a quickmake, quickbreak overcenter switching mechanism that is mechanically trip free from the handle so that the contacts cannot be held closed against short circuits and abnormal currents. Tripping due to overload or short circuit shall be clearly indicated by the handle automatically assuming a position midway between the manual ON and OFF positions. All latch surfaces shall be ground and polished. All poles shall be so constructed that they open, close and trip simultaneously.
- D.** Breakers shall be completely enclosed in a molded case. Amp ratings shall be clearly visible. Contacts shall be of nonwelding silver alloy. Arc extinction shall be accomplished by means of arc chutes, consisting of metal grids mounted in an insulating support.
- E.** Circuit breakers shall be UL listed and conform to the applicable requirements of NEMA Standards Publication No. AB1-1975, and meet the appropriate classifications of Federal Specifications W-C-375b.
- F.** Circuit breakers shall have an interrupting rating as shown on the drawings.

- G.** The breakers shall be furnished with an auxiliary switch which opens when breaker is tripped for remote alarm indication.

918.15.02.02 BARRIER

- A.** A full insulated barrier shall be provided between the metering transformer compartment and the main breaker compartment. This barrier shall be removable from the metering transformer compartment only.

918.15.02.03 ENCLOSURE

- A.** Enclosure shall be made of code gage steel with welded joints and removable front covers. Unit shall be free standing and arranged for front access only. Utility service leads shall enter bottom of enclosure and load leads shall exit the top.
- B.** Front door shall have formed flanged sides with sealed hinges.
- C.** Main breaker supports shall be arranged so breaker can be removed from front without removing supports.

918.15.02.04 BUS

- A.** Bus bars shall be silver plated copper. Bus bars shall be supported from an insulated and isolated support approved for that purpose.

THE FOLLOWING SECTION IS ADDED:

918.16 CIRCUIT BREAKERS

918.16.01 – GENERAL

918.16.01.01 SCOPE

- A.** The Contractor shall furnish and install the molded case circuit breakers as specified herein and as shown on the contract drawings.

918.16.01.02 RELATED SECTIONS

- A.** Section 918.10 PANELBOARDS AND CIRCUIT BREAKERS
- B.** Section 918.15 SERVICE EQUIPMENT

918.16.01.03 REFERENCES

- A. The molded case circuit breakers and all components shall be designed, manufactured and tested in accordance with the latest applicable standards of the following:
 - 1. UL 489 – Molded Case Circuit Breakers
 - 2. NEMA AB1 – Molded Case Circuit Breakers
 - 3. NEMA 250 – Enclosures for Electrical Equipment

918.16.01.04 SUBMITTALS

- A. The following information shall be submitted to the Engineer:
 - 1. Master drawing index
 - 2. Dimension sheet
 - 3. Accessory information
 - 4. Device ratings:
 - a. Voltage
 - b. Continuous current
 - c. Interrupting ratings
 - d. Cable terminal sizes
 - 5. Product data sheets

918.16.01.05 SUBMITTALS – FOR CONSTRUCTION

- A. The following information shall be submitted for record purposes:
Final as-built drawings and information for items listed in Paragraph 1.04, and shall incorporate all changes made during the manufacturing process

918.16.01.06 QUALIFICATIONS

- A. The manufacturer of the assembly shall be the manufacturer of the major components within the assembly.
- B. For the equipment specified herein, the manufacturer shall be ISO 9001 or 9002 certified.
- C. The manufacturer of this equipment shall have produced similar electrical equipment for a minimum period of five (5) years. When requested by the Engineer, an acceptable list of installations with similar equipment shall be provided demonstrating compliance with this requirement.

918.16.01.07 REGULATORY REQUIREMENTS

- A. Circuit breakers shall be UL listed.

918.16.01.08 DELIVERY, STORAGE AND HANDLING

- A. Equipment shall be handled and stored in accordance with manufacturer's instructions. One (1) copy of these instructions shall be included with the equipment at time of shipment.

918.16.01.09 OPERATION AND MAINTENANCE MANUALS

- A. Equipment operation and maintenance manuals shall be provided with each assembly shipped and shall include instruction leaflets, instruction bulletins and renewal parts lists where applicable, for the complete assembly and each major component.

918.16.02 – PRODUCTS

918.16.02.01 MANUFACTURERS

- A. Eaton
- B. Siemens
- C. Square D

The listing of specific manufacturers above does not imply acceptance of their products that do not meet the specified ratings, features and functions. Manufacturers listed above are not relieved from meeting these specifications in their entirety. Products in compliance with the specification and manufactured by others not named will be considered only if pre-approved by the Engineer ten (10) days prior to bid date.

918.16.02.02 MOLDED CASE CIRCUIT BREAKERS THROUGH 2500AMPS

Protective devices shall be UL489 Listed molded case circuit breakers with inverse time and instantaneous tripping characteristics and shall be Eaton or approved equal.

Circuit breakers shall be operated by a toggle-type handle and shall have a quick-make, quick-break over-center switching mechanism that is mechanically trip-free. Automatic tripping of the breaker shall be clearly indicated by the handle position. Contacts shall be nonwelding silver alloy and arc extinction shall be accomplished by means of DE-ION arc chutes. A push-to-trip button on the front of the circuit breaker shall provide a local manual means to exercise the trip mechanism.

Circuit breakers shall have a minimum symmetrical interrupting capacity as indicated on the drawings.

Circuit breakers 600 ampere frame and below shall have thermal-magnetic trip units and inverse time-current characteristics.

Circuit breakers 800 ampere through 2500-ampere frame shall have microprocessor-based sensing trip units as specified below:

Each molded case circuit breaker microprocessor-based tripping system shall consist of three (3) current sensors, a trip unit and a flux-transfer shunt trip. The trip unit shall use microprocessor-based technology to provide the adjustable, True-RMS, time-current protection functions. The trip unit shall be Eaton Digitrip 310+ or approved equal.

An adjustable trip setting dial mounted on the front of the trip unit, or interchangeable ratings plugs shall establish the continuous trip ratings of each circuit breaker. Rating plugs shall be fixed or adjustable as

indicated. Rating plugs shall be interlocked so they are not interchangeable between frames, and interlocked such that a breaker cannot be closed and latched with the rating plug removed.

System coordination shall be provided by the following microprocessor-based time-current curve shaping adjustments:

- a. Adjustable long-time setting (set by adjusting the trip setting dial or rating plug)
- b. Adjustable short-time setting and delay with selective curve shaping
- c. Adjustable instantaneous setting
- d. Circuit breakers, shall have Adjustable ground fault setting and delay

Circuit breakers shall include an Arc Flash Reduction Maintenance System (ARMs)

- e. The ARMs technology shall be provided to reduce arc energy during periods of maintenance. The system shall engage an independent, reduced instantaneous pickup and reduce total clearing time when activated.
 - f. With the ARMs technology active, total clearing time shall be equal to the total clearing time of the instantaneous override. Maintenance mode technology with clearing times greater than the instantaneous override are not acceptable.
 - g. Activation and deactivation of the ARMs technology and local indication shall be accessible from the face of the trip unit without opening the circuit breaker door and exposing operators to energized parts. Recalibration or adjustment of trip unit parameters shall not be required when enabling / disabling the ARMs technology.
 - d. Breakers shall include a local, lockable ARMs activation selector switch and pilot light indication.
 - e. Trip units shall include zone interlocking capability for the short-time delay and ground fault delay trip functions for improved system coordination. The zone interlocking system shall restrain the tripping of an upstream circuit breaker and allow the circuit breaker closest to the fault to trip with no intentional time delay. In the event that the downstream breaker does not trip, the upstream breaker shall trip after the pre-set time delay.
5. The microprocessor-based trip unit shall have both powered and unpowered thermal memory to provide protection against cumulative overheating should a number of overload conditions occur in quick succession.
- a. When the adjustable instantaneous setting is omitted, the trip unit shall be provided with an instantaneous override.
 - b. Where internal ground fault protection is specified, adjustable settings shall not exceed 1200 amperes. Provide neutral ground fault sensor for four-wire loads.

- c. Breakers shall have built-in test points for testing the long-time delay, instantaneous, and ground fault functions of the breaker by means of a test set.
- d. Provide an ammeter display, Eaton DigiView or approved equal. The metering module shall display load current, and after a fault, shall indicate the cause of trip.

THE FOLLOWING SECTION IS ADDED:

918.17 DISCONNECT SWITCHES

918.17.01 – GENERAL

918.17.01.01 SECTION INCLUDES

- A. Disconnect switches shall be furnished and installed at locations as shown on the drawings. Switches shall be of the type approved, indicated and specified herein.

918.17.01.02 REFERENCES

Double throw switches shall be manufactured in accordance with the following standards:

- A. UL 98 - Enclosed Switches
- B. NEMA KS 1 - Enclosed Switches
- C. NEMA 250 - Enclosures for Electrical Equipment

918.17.01.03 SERVICE ENTRANCE

- A. Disconnect switches identified for use as service equipment are to be labeled for this application.

918.17.01.04 DRAWINGS

- A. Provide outline drawings with dimensions, and equipment ratings for voltage, amperage and short circuit.

918.17.02 – PRODUCTS

918.17.02.01 MANUFACTURERS

- A. Disconnect switches shall be manufactured by Square D Company or approved equal.

918.17.02.02 SWITCH INTERIOR

- A. All switches shall have switch blades which are visible when the switch is OFF and the cover is open.
- B. Lugs shall be front removable and UL Listed for aluminum or copper 75° C conductors 200 - 600 Ampere.
- C. All current carrying parts shall be plated to resist corrosion.

918.17.02.03 SWITCH MECHANISM

- A. Switch operating mechanism shall be quick-break at the ampere rating as mentioned on the contract drawings.
- B. Provisions for padlocking the switch in the OFF position with at least three padlocks shall be provided.
- C. 60, 100 and 200 ampere, 2-pole and 3-pole Type 1 devices shall be supplied with a quick make, quick break dual cover interlock mechanism to prevent opening of the switch cover when the switch is ON and prevent turning the switch ON when the cover is open. The interlock mechanism shall be capable of being bypassed by use of a special key supplied with the device.
- D. Where shown, disconnect switches shall be of the double throw, three (3) position type to switch between SOURCE 1 (top position), OFF (middle position), SOURCE 2 (bottom position).

918.17.02.04 SWITCH ENCLOSURES

- A. Switch enclosures shall be rated NEMA 1 where installed indoors or inside a weatherproof cabinet. Switch enclosures shall be minimum NEMA 3R where installed outdoors/damp locations.
- B. Switch covers shall be attached with welded pin-type hinges Type 1 top hinged, attached with removable screws and securable in the open position Type 3R.
- C. The switch enclosure shall be finished with gray baked enamel paint which is electrodeposited on cleaned, phosphate pre-treated steel (Type 1) or gray baked enamel paint which is electrodeposited on cleaned, phosphate pre-treated galvanized steel (Type 3R).
- D. The enclosure shall be supplied with a nameplate which includes ON-OFF marking. Refer to Section 701.06.01 LABEL.

- E.** The enclosure for double throw, three (3) position switch shall be supplied with a nameplate which includes SOURCE 1 (top position), OFF (middle position), SOURCE 2 (bottom position). Top and bottom positions shall be named after the source providing power, i.e. Standby Generator, Roll-up Generator, Utility, etc. Refer to Section 701.06.01 LABEL
- F.** All switches shall be provided with tangential knockouts to facilitate ease of conduit entry.
- G.** Switches in Type 3R enclosures through 200 Ampere shall have provisions for interchangeable bolt-on hubs in the top endwall. Hubs shall be Square D B-Type hubs sized as indicated on the plans.

918.17.02.05 SWITCH RATINGS

- A.** The UL Listed short circuit current and withstand rating of the disconnect switch shall be 100kA minimum.

918.17.03 – EXECUTION

918.17.03.01 INSTALLATION

- A.** All disconnect switches shall be solidly attached to structural members prior to installation of conduit and set true and plumb. Proper anchors and screws shall be used when mounting to masonry walls. If masonry wall has a non-structural outer layer, anchors must be installed such that structural layer of wall is anchor point.
- B.** Contractor shall pull enough slack in wires to reach each terminal/lug prior to cutting wire. Cu/Al paste shall be used if terminals/lugs and wires are different material.

THE FOLLOWING SECTION IS ADDED:

918.18 SWITCHES

918.18.01 – GENERAL

918.18.01.01 SCOPE

- A.** Contractor shall furnish all labor, materials, equipment and incidentals required to provide switches for lighting and other systems as shown and specified.
- B.** Related Work Specified Elsewhere:
 - 1.** Section 701.03.18, Outlet Boxes.

918.18.01.02 QUALITY ASSURANCE

- A.** Reference Standards: Comply with applicable provisions and recommendations of the following except where otherwise shown or specified.
 - 1.** National Electrical Code.
 - 2.** UL 20, Standard for General-use Snap Switches.

918.18.01.03 SUBMITTALS

- A.** Shop Drawings: Submit for approval copies of manufacturer's technical information for switches proposed for use.

918.18.02 PRODUCTS

918.18.02.01 MATERIALS

- A.** Dry Locations: Single pole AC toggle switch, quiet type, 120/277 volt AC, 20 ampere, Ivory, specification grade.
 - 1.** Product and Manufacturer: Provide one of the following:
 - a.** Cat. #1221-I, by Harvey Hubbell Incorporated (3-way: Cat. #1223-I).
 - b.** Cat. #1991-I, by Arrow-Hart Incorporated (3-way: Cat. #1993-I).
 - c.** Or approved equal.
- B.** Damp Locations: 120 v AC, 20-ampere single pole snap switch, aluminum, weathertight.
 - 1.** Product and Manufacturer:
 - a.** Series EDS by Crouse Hinds.
 - b.** Or approved equal.
- C.** Corrosive Locations: NEMA 4X PVC box and cover. Furnish and install AC toggle switch (as specified above) in PVC box with toggle switch cover.
 - 1.** Product and Manufacturer:
 - a.** PVC box with Model E98TSC cover, by Carlon.
 - b.** Or approved equal.
- D.** Contactors, where indicated, shall control lighting. Contactors shall be mechanically held, 277 volts, suitable for two-wire control. Specific model numbers shown on Drawings.
 - 1.** Product and Manufacturer:
 - a.** Square D.
 - b.** Or approved equal.

918.18.03 – EXECUTION

918.18.03.01 INSTALLATION

- A.** Install wiring devices in outlet or device boxes with device cover plates in accordance with Section 701.03.18, Outlet Boxes.
- B.** Wall switches shall conform to ADA Regulations and be mounted between 30" and 48" above finished floor.
- C.** Install switches in conformance with National Electrical Code.

APPENDIX A: PREVAILING WAGE RATES

Notice

TO ALL PUBLIC WORKS EMPLOYERS:

Please be advised that effective February 18, 1992, Regulation N.J.A.C. 12:60-2.1 and 6.1 of the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq. requires that certified payroll records must be submitted to the public body for each employee on the project. The General Contractor is responsible for ensuring that each sub-contractor submits the certified payroll within ten (10) days of the payment of wages. The public body shall receive, file and make available for inspection during normal business hours the certified payroll records.

A copy of the certified payroll form may be obtained by contacting the New Jersey Department of Labor, Division of Workplace Standards, Public Contracts Section, P.O. Box 389, Trenton, NJ 08625-0389, telephone (609) 292-2259.

APPENDIX B: PUBLIC UTILITIES

**TOWN OF SECAUCUS
PUBLIC UTILITIES**

REVISED: 7/20

The following is a list of all corporations, companies, agencies or municipalities owning or controlling the utilities in the vicinity of the project site, and the name, address and telephone number of their local representatives:

WATER

Suez Water of NJ
60 DeVoe Place
Hackensack, NJ 07601
Attn: Mr. Anthony Vicente
Tel: (201) 525-2334
Fax: (201) 457-7970

SEWERS

Secaucus Municipal Utilities Authority
1100 Koelle Boulevard
Secaucus, NJ 07094
Attn: Mr. Brian Bigler, Executive Director
Tel: (201) 330-2089

Telephone

Verizon
6000 Hadley Rd
South Plainfield, New Jersey 07080
Attn: Thomas A. Gorman
Tel: 973-925-2053
Email: thomas.a.gorman@verizon.com

ELECTRIC

Public Service Electric & Gas Co.
325 County Avenue
Secaucus, New Jersey 07094
Attn: Mr. Dave Tarabocchia
Tel: (201) 330-6581

GAS

Public Service Electric & Gas Co.
240 Kuller Road
Clifton, New Jersey 07011
Attn: Mr. Bob Cody, Supervisor
Tel: (973)-365-2802

CABLE

Comcast
800 Rahway Avenue
Union, NJ 07083
Tel: (973) 736-7444 x 6208937

Notification of major utilities for markout may be accomplished by calling Garden State Underground Location Service at 1-800-272-1000.

PSE&G's PROCEDURE FOR RESETTING OR REPLACING OF MANHOLE FRAMES AND COVERS.

Please be advised that the following steps need to be maintained in order to meet local milling and paving schedules.

Once the contract has been awarded, your contractor should:

- Contact Public Service Electric & Gas (Engineering) 4 to 6 weeks prior to milling to discuss the scope of the project. Sufficient lead-time is essential in obtaining materials and coordinating schedules between PSE&G and local paving projects.
- Provide milling schedule. Project specific dates are required in hard copy.
- Conduct a walk through with job sponsor to identify resets and/or replacements. Please be advised that the final decision to replace facilities due to its condition resides with PSE&G.
- Provide reset elevations to PSE&G's contractor.

Once this information is received, the PSE&G job sponsor will order material (if required) in accordance with vendors lead time and schedule our contractor to complete manhole resets or replacements immediately following the milling process.

The successful contractor should proceed with care; damage to existing facilities or debris contaminating PSE&G manholes and or transformer vaults will be repaired or remedied at the contractor's expense.

Please be aware of the Underground Facilities Protection Act, codified NJSA 48:2-73 to 91, which requires contractors to notify "New Jersey One-Call" for utility markout "New Jersey One Call" Can be reached at 1-800-272-1000. PSE&G's contractor cannot begin work until four (4) business days after the markout request.

Please bring to the successful contractor's attention in New Jersey High Voltage Proximity Act, codified at N.J.S.A. 34:6-47.1 to 47.10, concerning precautions to be taken when working the proximity of high voltage wires.

In addition, we would also recommend that the contractor review the requirements for operators of construction equipment under the Occupational Safety and Health Act of 1970 (OSHA) and of Subpart "N", Paragraph 1926.550 of the Rules and Regulations issued thereunder and codified at 29 CFR 1926.550, which, in part, requires different working clearance than the State Law.

If you should have any questions, please contact me at (201) 330-6629 or Richard.dwyer@pseq.com.

APPENDIX C: NJDEP APPROVED PERMIT



STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WATERSHED & LAND MANAGEMENT
Mail Code 501-02A, P.O. Box 420, Trenton, New Jersey 08625-0420
Telephone: (609) 777-0454 or Fax: (609) 777-3656
www.nj.gov/dep/landuse



PERMIT

In accordance with the laws and regulations of the State of New Jersey, the Department of Environmental Protection hereby grants this permit to perform the activities described below. This permit is revocable with due cause and is subject to the terms, conditions, and limitations listed below and on the attached pages. For the purpose of this document, "permit" means "approval, certification, registration, authorization, waiver, etc." Violation of any term, condition, or limitation of this permit is a violation of the implementing rules and may subject the permittee to enforcement action.		Approval Date 12/7/2021
		Expiration Date 12/6/2026
Permit Number(s): 0909-21-0001.1 LUP 210002	Type of Approval(s): Flood Hazard Area Verification Flood Hazard Area Individual Permit	Governing Rule(s): N.J.A.C. 7:13-1.1(b)
Permittee: Town Of Secaucus c/o Gary Jeffas, Esq. 1203 Paterson Plank Road Secaucus, NJ 07094		Site Location: Block(s) & Lot(s): [203, 41] [203, 42] [203, 43] Municipality: Secaucus Town County: Hudson
Description of Authorized Activities: The is document verifies the flood hazard area limits of the Hackensack River on site, as depicted on the approved drawings, and authorizes the construction of a dog park, picnic areas, enclosed pavilion, and parking area in the tidal flood hazard area of the Hackensack River on the parcels referenced above in the Town of Secaucus, Hudson County, New Jersey. <i>The Department has determined that the herein approved activities meet the requirements of the FHACA rules. This approval does not obviate the local Floodplain Administrator's responsibility to ensure all development occurring within their community's Special Flood Hazard Area is compliant with the local Flood Damage Prevention Ordinance, and minimum NFIP standards, regardless of any state-issued permits. FEMA requires communities to review and permit all proposed construction or other development within their SFHA in order to participate in the NFIP.</i>		
Prepared by: Valda Opara		Received and/or Recorded by County Clerk:
If the permittee undertakes any regulated activity, project, or development authorized under this permit, such action shall constitute the permittee's acceptance of the permit in its entirety as well as the permittee's agreement to abide by the requirements of the permit and all conditions therein.		
This permit is not valid unless authorizing signature appears on the last page.		

STATEMENT OF AUTHORIZED IMPACTS:

The authorized activities allow for the permittee to undertake impacts to regulated areas as described below. Additional impacts to regulated areas without prior Department approval shall constitute a violation of the rules under which this document is issued and may subject the permittee and/or property owner to enforcement action, pursuant to N.J.A.C. 7:13-2.18

Riparian Zone Vegetation	Area of riparian zone (Acres)
Permanent Disturbed	0.010
Temporary Disturbed	0.031

PRE-CONSTRUCTION CONDITIONS:

1. Prior to the start of any regulated activities on-site, the permittee shall obtain a Zoning Certificate/Occupancy Certification from the New Jersey Sports and Exposition Authority.
2. In order to protect anadromous fishery resources within the Hackensack River, any activity within the watercourse are prohibited between April 1st through June 30th of each year. In addition, any activity within the 100 year flood plain or flood hazard area of this watercourse which could introduce sediment into said stream or which could cause an increase in the natural level of turbidity is also prohibited during this period. The Department reserves the right to suspend all regulated activities on site should it be determined that the permittee has not taken proper precautions to ensure continued compliance with this condition.

SPECIAL CONDITIONS:

1. Construction equipment shall not be stored, staged or driven within any channel, freshwater wetland or transition area, unless expressly approved by this permit and/or described on the approved plans.
2. The applicant shall adhere to the maintenance plan for the stormwater management measures incorporated into the design of the major development in accordance with N.J.A.C. 7:8-5.8 and the guidelines of the New Jersey Stormwater Best Management Practices Manual.
3. The Department has determined that this project meets the requirements of the Stormwater Management rules at N.J.A.C. 7:8. Any future expansion or alteration of the approved stormwater management system, which would affect water quality, increase the rate or volume of stormwater leaving the site, affect the infiltration capacity on the site, or alter the approved low impact site design, shall be reviewed and approved by the Department prior to

construction. This includes any proposed changes to the discharge characteristics of any basin, the construction of new inlets or pipes that tie into the storm sewer network and/or the replacement of existing inlets or pipes with structures of different capacity.

4. Within 90 calendar days of the date of this permit, the applicant shall submit the following information to the clerk of each county in which the site is located, and shall send proof to the Department that this information is recorded on the deed of each lot referenced in the verification:
 - a. The Department file number for the verification;
 - b. The approval and expiration dates of the verification;
 - c. The flood hazard area design flood elevation, or range of elevations if variable, approved under the verification;
 - d. The width and location of the riparian zone approved under the verification; and
 - e. The following statement: “The State of New Jersey has determined that all or a portion of this lot lies in a flood hazard area and/or riparian zone. Certain activities in flood hazard areas and riparian zones are regulated by the New Jersey Department of Environmental Protection and some activities may be prohibited on this site or may first require a flood hazard area permit. Consult www.nj.gov/dep/landuse or contact the Division of Land Use Regulation at (609) 777-0454 for more information prior to any construction onsite.”

Failure to have this information recorded in the deed of each lot and/or to submit proof of recording to the Department constitutes a violation of the Flood Hazard Area Control Act rules and may result in suspension or termination of the verification and/or subject the applicant to enforcement action pursuant to N.J.A.C. 7:13-24.

5. The Division has determined that the required riparian zone adjacent to the regulated waters affected by the project is 50 feet from the top of bank. **This permit authorizes the disturbance of 0.010 acres of riparian zone vegetation as shown on the approved plan.** Any additional disturbance to the riparian zone shall be considered a violation of the Flood Hazard Area Control Act rules unless a permit is obtained from the Division of Land Resource Protection prior to the start of the disturbance.
6. All sediment barriers and other soil erosion control measures shall be installed prior to commencing any clearing, grading or construction onsite, and shall be maintained in proper working condition throughout the entire duration of the project.
7. All necessary local, Federal and other state approvals must be obtained by the applicant prior to the commencement of the herein-permitted activities.

STANDARD CONDITIONS:

1. The issuance of a permit shall in no way expose the State of New Jersey or the Department to liability for the sufficiency or correctness of the design of any construction or structure(s). Neither the State nor the Department shall, in any way, be liable for any loss of life or property that may occur by virtue of the activity or project conducted as authorized under a permit.
2. The issuance of a permit does not convey any property rights or any exclusive privilege.
3. The permittee shall obtain all applicable Federal, State, and local approvals prior to commencement of regulated activities authorized under a permit.
4. A permittee conducting an activity involving soil disturbance, the creation of drainage structures, or changes in natural contours shall obtain any required approvals from the Soil Conservation District or designee having jurisdiction over the site.
5. The permittee shall take all reasonable steps to prevent, minimize, or correct any adverse impact on the environment resulting from activities conducted pursuant to the permit, or from noncompliance with the permit.
6. The permittee shall immediately inform the Department of any unanticipated adverse effects on the environment not described in the application or in the conditions of the permit. The Department may, upon discovery of such unanticipated adverse effects, and upon the failure of the permittee to submit a report thereon, notify the permittee of its intent to suspend the permit.
7. The permittee shall immediately inform the Department by telephone at (877) 927-6337 (WARN DEP hotline) of any noncompliance that may endanger public health, safety, and welfare, or the environment. The permittee shall inform the Watershed & Land Management by telephone at (609) 777-0454 of any other noncompliance within two working days of the time the permittee becomes aware of the noncompliance, and in writing within five working days of the time the permittee becomes aware of the noncompliance. Such notice shall not, however, serve as a defense to enforcement action if the project is found to be in violation of this chapter. The written notice shall include:
 - i. A description of the noncompliance and its cause;
 - ii. The period of noncompliance, including exact dates and times;
 - iii. If the noncompliance has not been corrected, the anticipated length of time it is expected to continue; and
 - iv. The steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

8. Any noncompliance with a permit constitutes a violation of this chapter and is grounds for enforcement action, as well as, in the appropriate case, suspension and/or termination of the permit.
9. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the authorized activity in order to maintain compliance with the conditions of the permit.
10. The permittee shall employ appropriate measures to minimize noise where necessary during construction, as specified in N.J.S.A. 13:1G-1 et seq. and N.J.A.C. 7:29.
11. The issuance of a permit does not relinquish the State's tidelands ownership or claim to any portion of the subject property or adjacent properties.
12. The issuance of a permit does not relinquish public rights to access and use tidal waterways and their shores.
13. The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to:
 - i. Enter upon the permittee's premises where a regulated activity, project, or development is located or conducted, or where records must be kept under the conditions of the permit;
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit; and
 - iii. Inspect, at reasonable times, any facilities, equipment, practices, or operations regulated or required under the permit. Failure to allow reasonable access under this paragraph shall be considered a violation of this chapter and subject the permittee to enforcement action.
14. The permittee shall not cause or allow any unreasonable interference with the free flow of a regulated water by placing or dumping any materials, equipment, debris or structures within or adjacent to the channel while the regulated activity, project, or development is being undertaken. Upon completion of the regulated activity, project, or development, the permittee shall remove and dispose of in a lawful manner all excess materials, debris, equipment, and silt fences and other temporary soil erosion and sediment control devices from all regulated areas.
15. The permittee and its contractors and subcontractors shall comply with all conditions, site plans, and supporting documents approved by the permit.
16. All conditions, site plans, and supporting documents approved by a permit shall remain in full force and effect, so long as the regulated activity, project, or development, or any

portion thereof, is in existence, unless the permit is modified pursuant to the rules governing the herein approved permits.

17. The permittee shall perform any mitigation required under the permit in accordance with the rules governing the herein approved permits.
18. If any condition or permit is determined to be legally unenforceable, modifications and additional conditions may be imposed by the Department as necessary to protect public health, safety, and welfare, or the environment.
19. Any permit condition that does not establish a specific timeframe within which the condition must be satisfied (for example, prior to commencement of construction) shall be satisfied within six months of the effective date of the permit.
20. A copy of the permit and all approved site plans and supporting documents shall be maintained at the site at all times and made available to Department representatives or their designated agents immediately upon request.
21. The permittee shall provide monitoring results to the Department at the intervals specified in the permit.
22. A permit shall be transferred to another person only in accordance with the rules governing the herein approved permits.
23. A permit can be modified, suspended, or terminated by the Department for cause.
24. The submittal of a request to modify a permit by the permittee, or a notification of planned changes or anticipated noncompliance, does not stay any condition of a permit.
25. Where the permittee becomes aware that it failed to submit any relevant facts in an application, or submitted incorrect information in an application or in any report to the Department, it shall promptly submit such facts or information.
26. The permittee shall submit written notification to the Bureau of Coastal and Land Use Compliance and Enforcement, 401 East State Street, 4th Floor, PO Box 420, Mail Code 401-04C, Trenton, NJ 08625, at least three working days prior to the commencement of regulated activities.
27. The permittee shall record the permit, including all conditions listed therein, with the Office of the County Clerk (the Registrar of Deeds and Mortgages, if applicable) of each county in which the site is located. The permit shall be recorded within 30 calendar days of receipt by the permittee, unless the permit authorizes activities within two or more counties, in which case the permit shall be recorded within 90 calendar days of receipt. Upon completion of all recording, a copy of the recorded permit shall be forwarded to Watershed & Land Management at the address listed on page one of this permit.

APPROVED PLANS:

The drawings hereby approved consist of eight (8) sheets prepared by Boswell Engineering, dated May 14, 2021, last revised December 1, 2021, unless otherwise noted, and entitled:

“FARM ROAD PARK BLOCK 203 LOTS 41, 42, & 43 TOWN OF SECAUCUS
HUDSON COUNTY NEW JERSEY”

- “EXISTING CONDITIONS”, sheet no. 2 of 9,
- “SITE PLAN”, sheet no. 3 of 9,
- “GRADING AND DRAINAGE PLAN”, sheet no. 4 of 9,
- “DETAIL SHEET – 1 - 3”, sheet nos. 7 - 9 of 9,
- “CROSS SECTION PLAN”, sheet no. 1 of 1, dated December 3, 2021, unrevised,
and;
- “ENVIRONMENTAL PLAN”, sheet no. 1 of 1.

APPEAL OF DECISION:

Any person who is aggrieved by this decision may submit an adjudicatory hearing request within 30 calendar days after public notice of the decision is published in the DEP Bulletin (available at www.nj.gov/dep/bulletin). If a person submits the hearing request after this time, the Department shall deny the request. The hearing request must include a completed copy of the Administrative Hearing Request Checklist (available at www.nj.gov/dep/landuse/forms.html). A person requesting an adjudicatory hearing shall submit the original hearing request to: NJDEP Office of Legal Affairs, Attention: Adjudicatory Hearing Requests, Mail Code 401-04L, P.O. Box 402, 401 East State Street, 7th Floor, Trenton, NJ 08625-0402. Additionally, a copy of the hearing request shall be submitted to the Director of Watershed & Land Management at the address listed on page one of this permit. In addition to your hearing request, you may file a request with the Office of Dispute Resolution to engage in alternative dispute resolution. Please see www.nj.gov/dep/odr for more information on this process.

If you need clarification on any section of this permit or conditions, please contact Watershed & Land Management’s Technical Support Call Center at (609) 777-0454.

Approved By:

Dhruv Patel, Environmental Engineer 3
Watershed & Land Management

c: Secaucus Town Municipal Clerk
Secaucus Town Municipal Construction Official
Agent (original) – Frank Rossi
Sharon Mascaro, New Jersey Sports and Exposition Authority

APPENDIX D: SOIL PILE TESTING RESULTS



LEGEND

- Orange arrow: Sample Collected from West Facing Side of Pile
- Yellow arrow: Sample Collected from East Facing Side of Pile

NOTES

Samples SP-RV-8 thru SP-RV-15 Collected on 5/12/21
Samples SP-RU-1 thru SP-RU-7 Collected on 12/10/2020

Site: 1150 Farm Road
Secaucus, NJ 07094
Fmr. Laminations by Estelle, Inc.
PI# 695135



NJDEP SPLP Spreadsheet, V3.1, November 2013

Case name/area of concern: soil reuse stockpile-1150 farm road
 Case number: 20-03-02-1259-47
 Sampling date: 12/10/2020

Contaminant: Dieldrin
 CAS No: 60-57-1
 Water solubility (mg/L): 1.95E-01
 Aqueous reporting limit (µg/L): 3.00E-02
 Soil reporting limit (mg/kg): 3.00E-03
 Health-based GWQC (µg/L): 2.00E-03
 DAF (20, or site-specific if approved): 20
 Leachate Criterion (µg/L): 4.00E-02
 Henry's law constant (dimensionless): 6.19E-04

NOTE:

USE ONE PAGE PER CONTAMINANT, do not leave empty rows between samples
 Do not enter samples with soil concentrations at or below the reporting limit
 When leachate concentration is non-detect, enter the aqueous reporting limit
 Enter site-specific dilution-attenuation factor (DAF) if desired

Data entry cells (do not skip rows)
 Optional data entry
 Calculated or locked cells
 Indicates that Alternative Remediation Standard needs to be recalculated

Sample ID	Soil sample weight (kg)	Leachate Volume (L)	Total Soil Concentration (mg/kg)	SPLP Leachate Concentration (µg/L)	Final pH of Leachate (except VOCs)	Optional data				Kd (L/kg)	% Contaminant in Leachate	Field leachate concentration (µg/L)	Pass or fail?
						Sampling Depth (ft)	Soil Type	Organic Carbon (mg/kg)	Organic Carbon (%)				
SP-RU-2	0.0879	2	0.00765	0.0195	5.06					369.6	5.80	0.02	PASS
SP-RU-1	0.0884	2	0.0104	0.0312	5.04					310.7	6.79	0.03	PASS
SP-RU-6	0.0891	2	0.0266	0.0583	5.06					433.8	4.92	0.06	FAIL

SPLP RESULTS for

OPTION 1a: All adjusted leachate concentrations are below the leachate criterion

OPTION 1a NOT VALID

OPTION 1b: Simple inspection of tabulated results to find highest acceptable standard

REMEDIATION STANDARD = 0.0104 mg/kg

OPTION 2: Remediation standard using site-specific Kd value

Kd ratio = 1.40, AVERAGING Kds OK

Kd USED FOR CALCULATING STANDARD = 371.36 L/kg

result before rounding = 0.0149 mg/kg

REMEDIATION STANDARD = 0.01 mg/kg

OPTION 3: Remediation standard using linear regression

Number of points = 2

(points were eliminated because leachate concentrations were not above the aqueous reporting limit)

Less than three points with leachate concentrations above the aqueous reporting limit

LINEAR REGRESSION CANNOT BE CONDUCTED

[illegible]

Work Order 1050683			NJDEP Soil Remediation Standards 2017				1050683-01	1050683-02	1050683-03	1050683-04	1050683-05	1050683-06	1050683-07	1050683-08
Lab: Aqua Pro-Tech Laboratories			Lab ID:	NJDEP Residential	NJDEP Non-Residential	NJDEP Impact To Ground Water	SP-RV-8	SP-RV-9	SP-RV-10	SP-RV-11	SP-RV-12	SP-RV-13	SP-RV-14	SP-RV-15
Client: Elias Environmental LLC - 1150 Farm Road Stockpile			Client ID:	Direct Contact	Direct Contact	Standard	05/12/2021 10:00	05/12/2021 10:15	05/12/2021 10:25	05/12/2021 10:35	05/12/2021 10:45	05/12/2021 10:55	05/12/2021 11:05	05/12/2021 11:35
			Date Sampled:	Standard	Standard	Lower of RDC, NRDC, IGW	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			Matrix:	9/2017	9/2017	11/2013								
CAS#	Compound	Type												
P - Indicates a Greater than 25% diff. between 2 GC columns.														
Key: <div>Reporting Limit exceeds Reg Standard</div> <div>Value Exceeded One or More of the Criteria</div> <div>Detected in Sample</div> <div>E Qualified, may require Dilution</div>														
Specific Footnotes: Soil Remediation Standards, N.J.A.C. 7:26D (version September 18, 2017) IGW - Guidance Document Version 2.0 - November 2013 (Table 1)														

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APL assumes no liability for the interpretation and/or accuracy of the standards.																																																																										
Qualifiers:																																																																										
U - Indicates compound analyzed for but not detected																																																																										
J - Indicates estimated value for TICs and all results when detected below the RL																																																																										
D - Indicates result is based on a dilution																																																																										
E - Concentration exceeds highest calibration standard																																																																										
B - Indicates compound found in associated blank																																																																										
H - Indicates a Hold Time violation																																																																										
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